

COMMERCIAL FRESHWATER FISH HARVESTERS: 2000 – 2016



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Chapter 1. Commercial Freshwater Fish Harvesters: 2000 - 2016

This report uses data from the Louisiana Department of Wildlife and Fisheries (LDWF) Trip Ticket Program to assess the commercial fishing activities in Louisiana related to any species of freshwater fish.

Under Louisiana law, a record at the point of first sales for all commercial seafood physically landed in Louisiana must be submitted to LDWF, reporting the commercial fishing license of the fishermen selling the product, the volume and dockside value of each species landed, gear used, and area fished among other parameters. These data have been collected and maintained by the LDWF Trip Ticket Program since the 1999-2000 fiscal year.

The data collected under the LDWF Trip Ticket Program pertain only to seafood physically landed within Louisiana and accordingly may not provide a complete measure of the commercial activity in Louisiana waters. The Trip Ticket Program is unable to collect data for seafood harvested in Louisiana but landed in other states. Further, though the Trip Ticket Program is able to identify landings made in other states and landed in Louisiana through a trip ticket parameter specifying the area fished, this report makes no effort to segregate landings harvested in Louisiana from those harvested elsewhere. Consequently, some of the fish included in this report's assessment of Louisiana landings may have been pulled from the waters of other states.

The data source for this report included over 27,000 records of cumulative annual landings of freshwater fish associated with the commercial fishing license numbers of all commercial fishermen with any records of freshwater fish landings in each year between 2000 and 2016. Variables from the Trip Ticket Program dataset included the year, cumulative volume (in pounds of whole fish) and nominal (or current dollar) value of reef fish landings. Data obtained from the LDWF commercial fishing license database for commercial fishermen with reef fish landings included ZIP code, parish or state of residence, and year of birth¹.

Number of Commercial Fishermen with Freshwater Fish Landings

The number of commercial fishermen with landings of freshwater fish followed a downward trend from 1,149 in 2000 to 636 in 2006, the year after hurricanes Katrina and Rita hit Louisiana (Table 1). The number of freshwater fish harvesters fluctuated over the following four years, reaching a period low of 632 in 2010 and a post-hurricane high of 805 in 2012. Seven hundred thirty-five commercial fishermen recorded landings of freshwater fish in 2016.

Table 1. Number of Commercial Fishermen Reporting Freshwater Landings in Louisiana

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number	1,149	1,022	936	839	877	797	636	674	695
Year	2009	2010	2011	2012	2013	2014	2015	2016	
Number	670	632	746	805	730	687	789	735	

¹ The individual records were listed by commercial fishing license number but did not contain the commercial fishermen's names or addresses. All data were handled with strict standards of confidentiality

Volume and Dockside Value of Freshwater Fish Landings in Louisiana

The volume of freshwater fish, measured in pounds of whole fish, in 2016 was 11.9 million pounds (Table 2). For most of the study period, the volume of freshwater fish was between approximately 11 and 12 million pounds. The volume was 10.4 million pounds in 2009 and 9.0 million pounds in 2010.

The real dockside value of commercial freshwater fish landings in Louisiana was five million dollars or more in 2000 and 2001 (Table 2). It fluctuated between \$4.1 and \$4.8 million between 2002 and 2008 and dropped to study period lows of \$3.4 and \$3.0 million in 2009 and 2010. Real dockside value rose afterward to almost \$5.0 million in 2015 and \$4.7 million in 2016.

Average Volume and Dockside Value of Freshwater Fish Landings per Commercial Freshwater Fish Harvester

The average volume of freshwater fish per freshwater fish harvester climbed during the early portion of the study period from 10,332 pounds per freshwater fish harvester in 2000 to about 18 thousand pounds per freshwater fish harvester in 2006 and 2007 (Table 3). The average dipped to 14,164 pounds per freshwater fish harvester in 2010 but rose to reach a range of 16 to 17 thousand pounds per fisherman in the last four years of the study period.

The average real dockside value of freshwater fish per freshwater fish harvester rose from \$4,832 in 2000 to the period high of \$7,492 in 2007 and then declined to a period minimum of \$4,777 in 2010 (Table 4). Average real dockside value rose over the following years to \$6,743 in 2014 and \$6,333 in 2016.

Table 2. Volume, Nominal Dockside Value, and Real Dockside Value of Commercial Freshwater Fish Landings in Louisiana

Year	Volume	Nominal Dockside Value	Real Dockside Value
2000	11,870,970	\$4,546,472	\$5,551,926
2001	13,268,371	\$4,189,802	\$5,002,748
2002	12,588,384	\$3,926,832	\$4,617,630
2003	11,229,325	\$3,542,319	\$4,083,836
2004	12,023,258	\$4,058,949	\$4,554,476
2005	11,756,737	\$4,090,507	\$4,446,687
2006	11,717,060	\$4,517,754	\$4,765,061
2007	12,300,210	\$4,374,293	\$4,493,829
2008	11,797,461	\$4,275,560	\$4,307,869
2009	10,379,034	\$3,420,848	\$3,420,848
2010	8,951,785	\$3,055,733	\$3,018,902
2011	11,475,270	\$4,402,357	\$4,261,308
2012	12,042,284	\$4,648,977	\$4,418,759
2013	12,336,977	\$4,701,105	\$4,396,433
2014	12,250,527	\$5,034,816	\$4,632,272
2015	12,649,657	\$5,448,246	\$4,953,041
2016	11,866,682	\$5,187,876	\$4,654,891
Volume = Pounds		Real Value = Constant Inflation-Adjusted 2009 Dollars	

Table 3. Average and Median Volume of Freshwater Fish Among Commercial Fishermen Who Landed Freshwater Fish

Variable	Average	Median	Standard Deviation	Coeff. of Variation
2000	10,331.6	1,568	27,448.02	265.67
2001	12,982.8	1,799	35,473.40	273.23
2002	13,449.1	1,872	31,305.31	232.77
2003	13,384.2	2,000	30,958.47	231.31
2004	13,709.5	1,938	31,761.30	231.67
2005	14,751.2	2,357	33,188.45	224.99
2006	18,423.1	3,041	45,540.85	247.19
2007	18,249.6	2,744	47,101.50	258.10
2008	16,974.8	3,471	44,357.25	261.31
2009	15,491.1	2,486	42,768.01	276.08
2010	14,164.2	2,284	39,986.19	282.30
2011	15,382.4	2,314	45,444.74	295.43
2012	14,959.4	2,303	42,801.16	286.12
2013	16,900.0	2,881	45,107.83	266.91
2014	17,831.9	3,600	44,753.30	250.97
2015	16,032.5	2,393	43,805.70	273.23
2016	16,145.0	2,171	45,330.17	280.77

Table 4. Average and Median Real Dockside Value of Freshwater Fish Among Commercial Fishermen Who Landed Freshwater Fish

Variable	Average	Median	Standard Deviation	Coeff. of Variation
2000	\$4,832	\$949	10,689.45	221.22
2001	\$4,895	\$936	10,457.80	213.64
2002	\$4,933	\$1,127	10,002.76	202.76
2003	\$4,868	\$1,028	9,702.20	199.33
2004	\$5,193	\$916	10,618.42	204.47
2005	\$5,579	\$1,160	13,804.24	247.42
2006	\$7,492	\$1,515	22,289.29	297.50
2007	\$6,667	\$1,556	15,848.73	237.70
2008	\$6,198	\$1,730	14,746.26	237.91
2009	\$5,106	\$1,400	10,186.61	199.51
2010	\$4,777	\$1,172	9,626.87	201.54
2011	\$5,712	\$1,270	14,288.45	250.14
2012	\$5,489	\$1,237	13,894.21	253.12
2013	\$6,023	\$1,489	13,176.28	218.78
2014	\$6,743	\$1,720	13,313.88	197.45
2015	\$6,278	\$1,306	15,295.14	243.65
2016	\$6,333	\$1,101	16,163.72	255.22

Average Age of Commercial Fishermen Who Landed Freshwater Fish in Louisiana

The ages of freshwater fish harvesters were determined for every year in the study period using birth year data obtained from the LDWF commercial fishing license database. The average age followed a generally upward trend from 45.2 years old in 2000 to approximately 49 years old in 2016 (Table 5).

Place of Residence for Commercial Fishermen Who Landed Reef Fish in Louisiana

In 2016, freshwater fish harvesters resided in 51 different parishes in Louisiana. A majority (53.4 percent) resided in seven parishes: St. Mary, St. Charles, St. Martin, Iberville, Assumption, Iberia, and Plaquemines (Table 6).

Table 5. Average and Median Age of Commercial Fishermen Who Landed Freshwater Fish

Year	Average	Median
2000	45.2	44
2001	46.7	45
2002	47.2	46
2003	46.8	45
2004	47.6	46
2005	48.0	47
2006	49.7	48
2007	47.8	47
2008	48.6	48
2009	49.1	48
2010	49.2	49
2011	48.0	48
2012	49.5	49
2013	49.5	50
2014	50.6	51
2015	49.8	50
2016	48.9	51

Table 6. Parish or State of Residence for Commercial Fishermen Who Landed Freshwater Fish

Area	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Acadia	5	5	5	7	4	7	5	8	5	7	5	7	8	11	7	6	13
	0.4%	0.5%	0.5%	0.8%	0.5%	0.9%	0.8%	1.2%	0.7%	1.0%	0.8%	0.9%	1.0%	1.5%	1.0%	0.8%	1.8%
Ascension	11	12	11	9	16	11	7	7	5	9	4	4	5	5	4	6	11
	1.0%	1.2%	1.2%	1.1%	1.8%	1.4%	1.1%	1.0%	0.7%	1.3%	0.6%	0.5%	0.6%	0.7%	0.6%	0.8%	1.5%
Assumption	86	62	65	51	47	45	49	39	45	44	48	60	48	59	69	66	42
	7.5%	6.1%	6.9%	6.1%	5.4%	5.6%	7.7%	5.8%	6.5%	6.6%	7.6%	8.0%	6.0%	8.1%	10.0%	8.4%	5.7%
Avoyelles	57	51	72	53	49	59	49	54	45	46	49	40	44	42	30	31	31
	5.0%	5.0%	7.7%	6.3%	5.6%	7.4%	7.7%	8.0%	6.5%	6.9%	7.8%	5.4%	5.5%	5.8%	4.4%	3.9%	4.2%
Caddo	8	8	7	6	9	5	5	7	8	6	5	8	7	6	5	5	5
	0.7%	0.8%	0.7%	0.7%	1.0%	0.6%	0.8%	1.0%	1.2%	0.9%	0.8%	1.1%	0.9%	0.8%	0.7%	0.6%	0.7%
Calcasieu	37	21	22	16	12	14	18	19	11	12	14	18	29	21	7	9	7
	3.2%	2.1%	2.4%	1.9%	1.4%	1.8%	2.8%	2.8%	1.6%	1.8%	2.2%	2.4%	3.6%	2.9%	1.0%	1.1%	1.0%
Cameron	23	25	14	15	14	10	8	15	12	12	10	11	13	14	6	♠	5
	2.0%	2.4%	1.5%	1.8%	1.6%	1.3%	1.3%	2.2%	1.7%	1.8%	1.6%	1.5%	1.6%	1.9%	0.9%	♠	0.7%
Catahoula	28	18	17	12	12	9	14	11	11	15	15	16	18	15	16	14	17
	2.4%	1.8%	1.8%	1.4%	1.4%	1.1%	2.2%	1.6%	1.6%	2.2%	2.4%	2.1%	2.2%	2.1%	2.3%	1.8%	2.3%
Concordia	23	20	19	18	16	12	12	11	14	19	16	12	14	8	11	13	10
	2.0%	2.0%	2.0%	2.1%	1.8%	1.5%	1.9%	1.6%	2.0%	2.8%	2.5%	1.6%	1.7%	1.1%	1.6%	1.6%	1.4%
Iberia	16	21	14	21	17	15	11	19	20	22	27	25	27	34	25	35	40
	1.4%	2.1%	1.5%	2.5%	1.9%	1.9%	1.7%	2.8%	2.9%	3.3%	4.3%	3.4%	3.4%	4.7%	3.6%	4.4%	5.4%
Iberville	71	75	60	77	78	75	58	53	68	56	44	60	56	48	62	61	49
	6.2%	7.3%	6.4%	9.2%	8.9%	9.4%	9.1%	7.9%	9.8%	8.4%	7.0%	8.0%	7.0%	6.6%	9.0%	7.7%	6.7%
Jefferson	60	46	32	32	36	31	15	12	15	13	14	17	25	26	31	21	18
	5.2%	4.5%	3.4%	3.8%	4.1%	3.9%	2.4%	1.8%	2.2%	1.9%	2.2%	2.3%	3.1%	3.6%	4.5%	2.7%	2.4%

Table 6. Parish or State of Residence for Commercial Fishermen Who Landed Freshwater Fish (Continued)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Lafourche	56	66	44	41	54	49	35	40	31	34	32	32	33	34	33	33	31
	4.9%	6.5%	4.7%	4.9%	6.2%	6.1%	5.5%	5.9%	4.5%	5.1%	5.1%	4.3%	4.1%	4.7%	4.8%	4.2%	4.2%
Livingston	7	12	7	8	6	6	5	♥	7	7	4	5	8	6	8	12	10
	0.6%	1.2%	0.7%	1.0%	0.7%	0.8%	0.8%	♥	1.0%	1.0%	0.6%	0.7%	1.0%	0.8%	1.2%	1.5%	1.4%
Plaquemines	65	65	52	54	47	47	14	34	38	28	32	46	38	30	38	31	38
	5.7%	6.4%	5.6%	6.4%	5.4%	5.9%	2.2%	5.0%	5.5%	4.2%	5.1%	6.2%	4.7%	4.1%	5.5%	3.9%	5.2%
Pointe Coupee	10	11	13	12	15	9	9	13	8	13	12	12	17	13	10	10	10
	0.9%	1.1%	1.4%	1.4%	1.7%	1.1%	1.4%	1.9%	1.2%	1.9%	1.9%	1.6%	2.1%	1.8%	1.5%	1.3%	1.4%
Rapides	17	13	16	8	8	12	11	3	5	5	6	10	7	6	9	11	8
	1.5%	1.3%	1.7%	1.0%	0.9%	1.5%	1.7%	0.4%	0.7%	0.7%	0.9%	1.3%	0.9%	0.8%	1.3%	1.4%	1.1%
St. Bernard	18	22	30	11	8	6	♥	11	5	7	3	6	12	5	6	7	5
	1.6%	2.2%	3.2%	1.3%	0.9%	0.8%	♥	1.6%	0.7%	1.0%	0.5%	0.8%	1.5%	0.7%	0.9%	0.9%	0.7%
St. Charles	56	53	46	40	32	31	20	26	22	19	29	35	38	33	42	63	60
	4.9%	5.2%	4.9%	4.8%	3.6%	3.9%	3.1%	3.9%	3.2%	2.8%	4.6%	4.7%	4.7%	4.5%	6.1%	8.0%	8.2%
St. James	21	21	14	14	16	15	11	14	12	12	15	13	13	12	10	11	10
	1.8%	2.1%	1.5%	1.7%	1.8%	1.9%	1.7%	2.1%	1.7%	1.8%	2.4%	1.7%	1.6%	1.6%	1.5%	1.4%	1.4%
St. Landry	22	31	39	37	40	34	25	26	38	27	23	25	33	35	24	25	32
	1.9%	3.0%	4.2%	4.4%	4.6%	4.3%	3.9%	3.9%	5.5%	4.0%	3.6%	3.4%	4.1%	4.8%	3.5%	3.2%	4.4%
St. Martin	47	45	48	46	46	62	56	51	61	38	29	65	66	63	45	52	50
	4.1%	4.4%	5.1%	5.5%	5.2%	7.8%	8.8%	7.6%	8.8%	5.7%	4.6%	8.7%	8.2%	8.6%	6.6%	6.6%	6.8%
St. Mary	169	125	114	114	124	96	81	64	87	85	78	107	102	86	85	119	113
	14.7%	12.2%	12.2%	13.6%	14.1%	12.0%	12.7%	9.5%	12.5%	12.7%	12.3%	14.3%	12.7%	11.8%	12.4%	15.1%	15.4%
St. Tammany	11	9	7	♥	6	7	3	7	5	3	3	3	13	15	8	8	6
	1.0%	0.9%	0.7%	♥	0.7%	0.9%	0.5%	1.0%	0.7%	0.4%	0.5%	0.4%	1.6%	2.1%	1.2%	1.0%	0.8%

Table 6. Parish or State of Residence for Commercial Fishermen Who Landed Freshwater Fish (Concluded)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tangipahoa	11	11	7	8	10	7	5	6	5	11	6	8	10	10	6	6	4
	1.0%	1.1%	0.7%	1.0%	1.1%	0.9%	0.8%	0.9%	0.7%	1.6%	0.9%	1.1%	1.2%	1.4%	0.9%	0.8%	0.5%
Terrebonne	51	49	44	31	44	29	26	21	20	32	29	24	31	20	22	45	34
	4.4%	4.8%	4.7%	3.7%	5.0%	3.6%	4.1%	3.1%	2.9%	4.8%	4.6%	3.2%	3.9%	2.7%	3.2%	5.7%	4.6%
Vermilion	37	25	22	17	19	14	17	18	20	19	20	19	18	18	16	19	17
	3.2%	2.4%	2.4%	2.0%	2.2%	1.8%	2.7%	2.7%	2.9%	2.8%	3.2%	2.5%	2.2%	2.5%	2.3%	2.4%	2.3%
Other North Louisiana	20	20	21	13	19	21	19	20	25	18	12	13	14	16	16	19	18
	1.7%	2.0%	2.2%	1.5%	2.2%	2.6%	3.0%	3.0%	3.6%	2.7%	1.9%	1.7%	1.7%	2.2%	2.3%	2.4%	2.4%
Other Central	41	31	28	18	25	19	19	28	16	16	15	13	14	10	9	10	9
	3.6%	3.0%	3.0%	2.1%	2.9%	2.4%	3.0%	4.2%	2.3%	2.4%	2.4%	1.7%	1.7%	1.4%	1.3%	1.3%	1.2%
Other Southeastern	13	14	12	16	13	11	8	12	9	12	10	11	11	9	9	12	15
	1.1%	1.4%	1.3%	1.9%	1.5%	1.4%	1.3%	1.8%	1.3%	1.8%	1.6%	1.5%	1.4%	1.2%	1.3%	1.5%	2.0%
Other Southwestern	20	14	24	21	19	18	11	15	11	10	12	11	16	9	11	17	12
	1.7%	1.4%	2.6%	2.5%	2.2%	2.3%	1.7%	2.2%	1.6%	1.5%	1.9%	1.5%	2.0%	1.2%	1.6%	2.2%	1.6%
Out of State	5	6	4	5	5	4	3	4	†	3	†	3	3	3	0	0	†
	0.4%	0.6%	0.4%	0.6%	0.6%	0.5%	0.5%	0.6%	†	0.4%	†	0.4%	0.4%	0.4%	0.0%	0.0%	†
Unknown or Unidentified	27	15	6	8	11	7	7	6	11	10	11	7	14	8	7	12	5
	2.3%	1.5%	0.6%	1.0%	1.3%	0.9%	1.1%	0.9%	1.6%	1.5%	1.7%	0.9%	1.7%	1.1%	1.0%	1.5%	0.7%
The “Other North Louisiana” category includes Bienville, Bossier, Claiborne, East Carroll, Lincoln, Madison, Morehouse, Ouachita, Richland, Union, Webster, and West Carroll parishes.																	
The “Other Central Louisiana” category includes Caldwell, De Soto, Franklin, Grant, Jackson, La Salle, Natchitoches, Red River, Sabine, Tensas, and Winn parishes.																	
The “Other Southeastern” category includes East Baton Rouge, East Feliciana, Orleans, St. Helena, St. John the Baptist, Washington, West Feliciana parishes																	
The “Other Southwestern” category includes Allen, Beauregard, Evangeline, Jefferson Davis, Lafayette, Vernon, West Baton Rouge																	
♠ Values were included in the “Other Southwestern Louisiana” category to maintain confidentiality standards.																	
♥ Values were included in the “Other Southeastern Louisiana” category to maintain confidentiality standards.																	
† Values for “were included in the “Unknown or Confidential” category to maintain confidentiality standards.																	

Variation from the Average for Volume and Dockside Value

Examinations of Tables 3 and 4 reveal great differences between the average and the median values for the volume and dockside value of freshwater fish landings. Throughout the study period, the average volume in a particular year was typically five to seven times as large as the corresponding median. The average dockside values were usually four to five times larger than median dockside values. The fairly large gaps between these measures of central tendency suggest that a large portion of commercial fishermen harvest a relatively small amount of freshwater fish, and a relatively small portion landed a large amount of fish.

A second set of indicators of the wide dispersal of these variables' values is their relatively large standard deviation measures. Standard deviation measurements for the volume of freshwater fish range from 27,448 in 2000 to 47,102 in 2007. For the real dockside value, standard deviation varies from 9,627 in 2010 to 16,164 in 2016.

Another measure of variation within the same, the coefficient of variation, puts the standard deviation in context relative to the mean. This coefficient is the product of 100 times the quotient of the standard deviation divided by the average. For both of these variables, the coefficient of variation was usually larger than 200, meaning the standard deviation measure was frequently at least twice as large as the average for these parameters throughout the 2000 through 2016 period.

All these indicate that these parameters vary so widely that a measure of central tendency, such as the average or median, is somewhat limited in its ability to depict a "typical" commercial fisherman who harvested freshwater fish. For example, while the average volume of freshwater fish landings was 16,145 pounds in 2016, it may be somewhat inaccurate to say that most freshwater fish harvesters landed a comparable amount. Landings ranged from a minimum of less than 10 pounds to a maximum of more than 370,000 pounds. Four-fifths (80.4 percent) landed less than the average. A more detailed examination of the distribution of commercial fishing activity may give a more complete picture of the population of commercial freshwater fish harvesters.

Chapter 2. Commercial Freshwater Fish Volume Categories

To illustrate the variation or diversity within the population of commercial freshwater fish harvesters, this section divides that population into four categories defined by the volume of freshwater fish each landed in a year. The small volume category includes all commercial fishermen who landed less than 560 pounds of freshwater fish in a calendar year. The lower-middle volume category consists of all those who landed between 560 and 2,800 pounds, and the upper-middle volume category those who landed between 2,800 and 12,000 pounds. The large volume category includes all those with 12,000 pounds or more.

These categories were determined by examining the distribution of all year-total commercial freshwater fishing landings volumes from 2012 through 2015 and dividing it into four roughly equal-sized groups. In 2016, approximately one quarter of the commercial fishermen who landed freshwater fish fell into each volume category (Table 7). About 27 percent each were in the small volume category (200) and the lower-middle volume category (197). About 22 percent were in the upper-middle volume category (163) and 23.8 percent were in the large volume category (175).

Volume and Dockside Value of Freshwater Fish by Volume Categories

There are disparities in the proportions of total volume and dockside value realized by the commercial fishermen in each volume category. For instance, though each category comprise a similar proportion of the population of freshwater fish harvesters in 2016, commercial fishermen in the small volume category accounted for only 0.4 percent of the volume (Table 8) and 3.1 percent of the value (Table 9) of freshwater fish landed that year, while those in the large volume category harvested 88.6 percent of the total volume and 80.0 percent of the total value. Commercial fishermen in the lower-middle volume category in the lower-middle volume category landed 2.3 percent, and fishermen in the upper-middle volume category landed 8.7 percent of the volume of freshwater fish in 2016.

The volume of freshwater fish landings harvested by small volume category fishermen ranged from 0.3 percent to 0.6 percent of the total volume throughout the study period. Their share of the total dockside value varied from 0.7 percent to 3.1 percent of the cumulative dockside value. In every year within the study period, the share of the cumulative dockside value landed by small category fishermen was larger than the share of the cumulative volume. In 2000, for example, small category freshwater fish harvesters accounted for 0.6 percent of the volume but 1.3 percent of the dockside value of total freshwater fish landings.

The proportion of the cumulative volume of freshwater fish harvested by freshwater fish harvesters in the lower-middle volume category ranged from 1.7 percent to 3.5 percent during the study period. The proportion of the cumulative dockside value ranged from 3.5 percent to 7.4 percent. Throughout the study period, the proportion of the dockside value harvested by lower-middle volume fishermen was consistently larger than the proportion of the cumulative volume that they harvested.

Table 7. Number of Commercial Fishermen and Percentage of All Commercial Fishermen Who Landed Freshwater Fish in Each Fish Volume Category: 2000 - 2016

Year	Volume Category	Small	Lower-Middle	Upper Middle	Large	Total
2000	Number	390	298	247	214	1,149
	Percent	33.9%	25.9%	21.5%	18.6%	
2001	Number	327	251	232	212	1,022
	Percent	32.0%	24.6%	22.7%	20.7%	
2002	Number	282	247	193	214	936
	Percent	30.1%	26.4%	20.6%	22.9%	
2003	Number	251	207	192	189	839
	Percent	29.9%	24.7%	22.9%	22.5%	
2004	Number	270	231	170	206	877
	Percent	30.8%	26.3%	19.4%	23.5%	
2005	Number	211	206	176	204	797
	Percent	26.5%	25.8%	22.1%	25.6%	
2006	Number	163	146	154	173	636
	Percent	25.6%	23.0%	24.2%	27.2%	
2007	Number	159	180	148	187	674
	Percent	23.6%	26.7%	22.0%	27.7%	
2008	Number	155	174	177	189	695
	Percent	22.3%	25.0%	25.5%	27.2%	
2009	Number	184	163	144	179	670
	Percent	27.5%	24.3%	21.5%	26.7%	
2010	Number	168	169	149	146	632
	Percent	26.6%	26.7%	23.6%	23.1%	
2011	Number	193	204	172	177	746
	Percent	25.9%	27.3%	23.1%	23.7%	
2012	Number	203	224	186	192	805
	Percent	25.2%	27.8%	23.1%	23.9%	
2013	Number	178	180	181	191	730
	Percent	24.4%	24.7%	24.8%	26.2%	
2014	Number	160	151	177	199	687
	Percent	23.3%	22.0%	25.8%	29.0%	
2015	Number	210	198	189	192	789
	Percent	26.6%	25.1%	24.0%	24.3%	
2016	Number	200	197	163	175	735
	Percent	27.2%	26.8%	22.2%	23.8%	
Small Volume Category = Commercial fishermen with less than 560 pounds of freshwater fish landings Lower-Middle Volume Category = Commercial fishermen with 560 to 2,799 pounds of freshwater fish landings Upper-Middle Volume Category = Commercial fishermen with 2,800 to 11,999 pounds of freshwater fish landings Large Volume Category = Commercial fishermen with more than 12,000 pounds of freshwater fish landings						

Table 8. Cumulative Volume of Freshwater Fish Landings and Percentage of the Total Caught by Commercial Fishermen in Each Volume Category: 2000-2016

Year	Volume Category	Small	Lower-Middle	Upper Middle	Large	Total
2000	Number	74,436	416,893	1,478,293	9,901,349	11,870,970
	Percent	0.6%	3.5%	12.5%	83.4%	
2001	Number	64,945	341,552	1,497,186	11,364,687	13,268,371
	Percent	0.5%	2.6%	11.3%	85.7%	
2002	Number	59,110	344,975	1,202,069	10,982,230	12,588,384
	Percent	0.5%	2.7%	9.5%	87.2%	
2003	Number	52,533	286,612	1,218,207	9,671,974	11,229,325
	Percent	0.5%	2.6%	10.8%	86.1%	
2004	Number	54,675	343,913	1,003,959	10,620,710	12,023,258
	Percent	0.5%	2.9%	8.4%	88.3%	
2005	Number	47,558	283,131	1,038,273	10,387,775	11,756,737
	Percent	0.4%	2.4%	8.8%	88.4%	
2006	Number	37,105	202,865	981,661	10,495,429	11,717,060
	Percent	0.3%	1.7%	8.4%	89.6%	
2007	Number	35,330	264,763	906,283	11,093,834	12,300,210
	Percent	0.3%	2.2%	7.4%	90.2%	
2008	Number	34,690	256,112	1,152,579	10,354,080	11,797,461
	Percent	0.3%	2.2%	9.8%	87.8%	
2009	Number	40,744	245,877	941,927	9,150,487	10,379,034
	Percent	0.4%	2.4%	9.1%	88.2%	
2010	Number	41,242	238,677	935,006	7,736,859	8,951,785
	Percent	0.5%	2.7%	10.4%	86.4%	
2011	Number	42,629	290,939	1,095,474	10,046,228	11,475,270
	Percent	0.4%	2.5%	9.5%	87.5%	
2012	Number	43,802	301,342	1,146,232	10,550,908	12,042,284
	Percent	0.4%	2.5%	9.5%	87.6%	
2013	Number	42,016	253,104	1,101,390	10,940,468	12,336,977
	Percent	0.3%	2.1%	8.9%	88.7%	
2014	Number	38,552	231,182	1,126,925	10,853,868	12,250,527
	Percent	0.3%	1.9%	9.2%	88.6%	
2015	Number	50,471	285,988	1,219,752	11,093,446	12,649,657
	Percent	0.4%	2.3%	9.6%	87.7%	
2016	Number	44,166	277,370	1,028,105	10,517,042	11,866,682
	Percent	0.4%	2.3%	8.7%	88.6%	

Table 9. Cumulative Real Dockside Value of Freshwater Fish Landings and Percentage of the Total Caught by Commercial Fishermen in Each Volume Category: 2000-2016

Year	Volume Category	Small	Lower-Middle	Upper Middle	Large	Total
2000	Number	\$74,629	\$335,527	\$981,152	\$4,160,617	\$5,551,926
	Percent	1.3%	6.0%	17.7%	74.9%	
2001	Number	\$67,340	\$236,383	\$843,533	\$3,855,493	\$5,002,748
	Percent	1.3%	4.7%	16.9%	77.1%	
2002	Number	\$62,874	\$296,590	\$679,604	\$3,578,563	\$4,617,630
	Percent	1.4%	6.4%	14.7%	77.5%	
2003	Number	\$56,233	\$254,271	\$635,332	\$3,138,000	\$4,083,836
	Percent	1.4%	6.2%	15.6%	76.8%	
2004	Number	\$62,925	\$299,852	\$555,909	\$3,635,790	\$4,554,476
	Percent	1.4%	6.6%	12.2%	79.8%	
2005	Number	\$52,542	\$209,297	\$526,426	\$3,658,422	\$4,446,687
	Percent	1.2%	4.7%	11.8%	82.3%	
2006	Number	\$39,376	\$203,042	\$564,078	\$3,958,565	\$4,765,061
	Percent	0.8%	4.3%	11.8%	83.1%	
2007	Number	\$52,343	\$246,499	\$436,808	\$3,758,178	\$4,493,829
	Percent	1.2%	5.5%	9.7%	83.6%	
2008	Number	\$45,703	\$204,908	\$637,287	\$3,419,971	\$4,307,869
	Percent	1.1%	4.8%	14.8%	79.4%	
2009	Number	\$42,967	\$254,696	\$472,108	\$2,651,076	\$3,420,848
	Percent	1.3%	7.4%	13.8%	77.5%	
2010	Number	\$43,699	\$176,298	\$493,354	\$2,305,551	\$3,018,902
	Percent	1.4%	5.8%	16.3%	76.4%	
2011	Number	\$54,735	\$259,009	\$574,380	\$3,373,185	\$4,261,308
	Percent	1.3%	6.1%	13.5%	79.2%	
2012	Number	\$52,402	\$224,235	\$688,035	\$3,454,087	\$4,418,759
	Percent	1.2%	5.1%	15.6%	78.2%	
2013	Number	\$56,719	\$232,580	\$617,421	\$3,489,713	\$4,396,433
	Percent	1.3%	5.3%	14.0%	79.4%	
2014	Number	\$34,661	\$161,143	\$662,073	\$3,774,395	\$4,632,272
	Percent	0.7%	3.5%	14.3%	81.5%	
2015	Number	\$47,599	\$186,709	\$745,426	\$3,973,306	\$4,953,041
	Percent	1.0%	3.8%	15.0%	80.2%	
2016	Number	\$142,744	\$210,699	\$576,144	\$3,725,305	\$4,654,891
	Percent	3.1%	4.5%	12.4%	80.0%	

The percentage of the cumulative volume of freshwater fish harvested by freshwater fish harvesters in the upper-middle volume category varied between 7.4 percent and 12.5 percent during the study period while the percentage of the cumulative dockside value varied from 11.8 percent to 17.7 percent.

Freshwater fish harvesters in the large volume category landed between 83.4 percent to 90.2 percent of the cumulative volume and 74.9 percent to 83.6 percent of the cumulative dockside value of freshwater fish in each year in the study period. In every year, the proportion of the dockside value of freshwater fish landed by fishermen in the large volume category was less than the percentage of the volume that they harvested. In 2014, for instance, large volume category freshwater fish harvesters accounted for 88.6 percent of the cumulative volume of freshwater fish but only 81.5 percent of the cumulative dockside value.

Descriptive Statistics for Selected Characteristics of Commercial Fishermen by Volume Category

This section uses trip ticket data for each commercial fisherman and related data from the commercial license database to examine descriptive statistics for commercial fishing activity parameters, age, and place of residence for freshwater fish harvesters in each volume category. Average measurements for each group are provided in every year for the volume and nominal dockside value of freshwater fish, the commercial fishermen's age, and the percentages of each group residing in selected parishes.

Commercial Fishermen in the Small Volume Category

The average volume of freshwater fish landed by commercial fishermen in the small volume category in 2016 was 220.8 pounds (Table 10), somewhat less than the category midpoint. The average real dockside value for freshwater fish harvesters in this category that year was \$714 (Table 11). The average age of a freshwater fish harvester in the small volume category in 2015 was 48.1 years old, up from 42.1 years old in 2000 (Table 12). Half resided in St. Martin, Plaquemines, St. Charles, Terrebonne, St. Mary, or Iberia Parish (Table 13).

Commercial Fishermen in the Lower-Middle Volume Category

Among freshwater fish harvesters in the lower-middle volume category in 2016, the average volume was 1,408.0 pounds and the average real dockside value was \$1,070. The average age of a freshwater fish harvester in this category was 50.5 years old. About one-third of the fishermen in this category resided in St. Mary, St. Charles, or Lafourche Parish.

Table 10. Average Volume of Freshwater Fish Landed by Commercial Fishermen in Each Fish Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	190.9	1,399.0	5,985.0	46,268.0
2001	198.6	1,360.8	6,453.4	53,607.0
2002	209.6	1,396.7	6,228.3	51,318.8
2003	209.3	1,384.6	6,344.8	51,174.5
2004	202.5	1,488.8	5,905.6	51,556.8
2005	225.4	1,374.4	5,899.3	50,920.5
2006	227.6	1,389.5	6,374.4	60,667.2
2007	222.2	1,470.9	6,123.5	59,325.3
2008	223.8	1,471.9	6,511.8	54,783.5
2009	221.4	1,508.5	6,541.2	51,120.0
2010	245.5	1,412.3	6,275.2	52,992.2
2011	220.9	1,426.2	6,369.0	56,758.4
2012	215.8	1,345.3	6,162.5	54,952.7
2013	236.0	1,406.1	6,085.0	57,279.9
2014	240.9	1,531.0	6,366.8	54,542.1
2015	240.3	1,444.4	6,453.7	57,778.4
2016	220.8	1,408.0	6,307.4	60,097.4
Volume = Pounds				

Table 11. Average Real Dockside Value of Freshwater Fish Landed by Commercial Fishermen in Each Fish Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	\$191	\$1,126	\$3,972	\$19,442
2001	\$206	\$942	\$3,636	\$18,186
2002	\$223	\$1,201	\$3,521	\$16,722
2003	\$224	\$1,228	\$3,309	\$16,603
2004	\$233	\$1,298	\$3,270	\$17,649
2005	\$249	\$1,016	\$2,991	\$17,933
2006	\$242	\$1,391	\$3,663	\$22,882
2007	\$329	\$1,369	\$2,951	\$20,097
2008	\$295	\$1,178	\$3,600	\$18,095
2009	\$234	\$1,563	\$3,279	\$14,810
2010	\$260	\$1,043	\$3,311	\$15,791
2011	\$284	\$1,270	\$3,339	\$19,058
2012	\$258	\$1,001	\$3,699	\$17,990
2013	\$319	\$1,292	\$3,411	\$18,271
2014	\$217	\$1,067	\$3,741	\$18,967
2015	\$227	\$943	\$3,944	\$20,694
2016	\$714	\$1,070	\$3,535	\$21,287

Table 12. Average Age of Freshwater Fish-Landing Commercial Fishermen in Each Fish Volume Category: 2000 – 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	42.1	44.9	47.3	47.9
2001	43.3	47.9	46.8	49.9
2002	46.1	44.3	48.2	50.5
2003	43.6	47.7	46.7	49.8
2004	46.1	47.1	47.9	49.8
2005	47.4	45.6	49.0	50.0
2006	49.0	49.6	49.8	50.3
2007	44.3	46.8	50.3	49.7
2008	47.0	47.5	48.1	51.4
2009	47.5	48.2	49.3	51.2
2010	47.0	47.8	51.9	50.7
2011	46.3	47.4	47.9	50.9
2012	46.8	50.8	49.9	50.6
2013	46.8	49.8	51.2	50.0
2014	48.4	51.5	52.0	50.5
2015	48.0	50.3	50.6	50.6
2016	48.1	50.5	51.0	46.1

Commercial Fishermen in the Upper-Middle Volume Category

For freshwater fish harvesters in the upper-middle volume category in 2016, the average volume of freshwater fish landings was 6,307.4 pounds and the average dockside value was \$3,535. The average age of a freshwater fish harvester in this volume category was 51 years old. One-fifth of the upper-middle volume category freshwater fish harvesters resided in St. Mary Parish. About 10 percent lived in Iberville Parish and an additional 12 percent lived in Iberia or Assumption Parish.

Commercial Fishermen in the Large Volume Category

The average volume of freshwater fish landings for commercial fishermen in the large volume category in 2016 was 60,097.4 pounds with an average real dockside value was \$21,287. The average age in 2015 was 46.1 years old. Twenty-eight percent of the large volume category freshwater fish harvesters resided in St. Mary or Avoyelles Parish. A similar proportion (28.4 percent) resided in Iberville, St. Charles, or Assumption Parish.

Table 13. Parish of Residence for Commercial Fishermen in Each Volume Category Who Harvested Freshwater Fish in 2016

		Small	Lower Middle	Upper Middle	Large
Assumption	Number	8	8	10	16
	Percent	4.0%	4.1%	6.1%	9.1%
Avoyelles	Number	♣	3	5	21
	Percent	♣	1.5%	3.1%	12.0%
Calcasieu	Number	4	3	0	0
	Percent	2.0%	1.5%	0.0%	0.0%
Iberia	Number	15	12	4	9
	Percent	7.5%	6.1%	2.5%	5.1%
Iberville	Number	♠	13	16	18
	Percent	♠	6.6%	9.8%	10.3%
Jefferson	Number	10	4	3	♥
	Percent	5.0%	2.0%	1.8%	♥
Lafayette	Number	0	4	0	0
	Percent	0.0%	2.0%	0.0%	0.0%
Lafourche	Number	9	15	4	3
	Percent	4.5%	7.6%	2.5%	1.7%
Orleans	Number	3	0	0	0
	Percent	1.5%	0.0%	0.0%	0.0%
Plaquemines	Number	18	10	8	♥
	Percent	9.0%	5.1%	4.9%	♥
St. Charles	Number	17	17	10	16
	Percent	8.5%	8.6%	6.1%	9.1%
St. Landry	Number	12	5	7	8
	Percent	6.0%	2.5%	4.3%	4.6%
St. Martin	Number	19	6	15	10
	Percent	9.5%	3.0%	9.2%	5.7%
St. Mary	Number	15	32	38	28
	Percent	7.5%	16.2%	23.3%	16.0%
Terrebonne	Number	17	9	4	4
	Percent	8.5%	4.6%	2.5%	2.3%
Vermilion	Number	6	6	4	♠
	Percent	3.0%	3.0%	2.5%	♠
Other North Louisiana	Number	7	6	†	7
	Percent	3.5%	3.0%	†	4.0%
Other Central Louisiana	Number	7	10	10	19
	Percent	3.5%	5.1%	6.1%	10.9%

Table 13. Parish of Residence in 2015 for Commercial Fishermen in Each Volume Category Who Harvested Freshwater Fish (Concluded)

		Small	Lower Middle	Upper Middle	Large
Other Southeastern Louisiana	Number	18	19	15	9
	Percent	9.0%	9.6%	9.2%	5.1%
Other Southwestern Louisiana	Number	13	12	8	6
	Percent	6.5%	6.1%	4.9%	3.4%
Unknown or Confidential	Number	2	3	2	1
	Percent	1.0%	1.5%	1.2%	0.6%
<p>The “Other North Louisiana” category includes Bienville, Bossier, Caddo, Lincoln, Morehouse, Union, and Webster parishes.</p> <p>The “Other Central Louisiana” category includes Avoyelles, Caldwell, Catahoula, Concordia, La Salle, Natchitoches, Rapides, Red River, and Winn parishes.</p> <p>The “Other Southeastern” category includes Ascension, East Baton Rouge, East Feliciana, Livingston, St. Bernard, St. James, St. Tammany, Tangipahoa, Washington, and West Feliciana parishes.</p> <p>The “Other Southwestern Parishes” category includes Acadia, Beauregard, Cameron, Evangeline, Iberville, Jefferson Davis, Pointe Coupee, Vernon, and West Baton Rouge parishes.</p> <p>♦ Values were included in the “Other Northern Louisiana” category to maintain confidentiality standards. ♣ Values for were included in the “Other Central Louisiana” category to maintain confidentiality standards. ♠ Values were included in the “Other Southwestern Louisiana” category to maintain confidentiality standards. ♥ Values were included in the “Other Southeastern Louisiana” category to maintain confidentiality standards. † Values were included in the “Unknown or Confidential” category to maintain confidentiality standards.</p>					

Chapter Conclusion

This chapter examined the variation in activity among participants in the commercial freshwater fishery by dividing the population of freshwater fish harvesters into four groups of roughly equal size. Far from a uniform entity, the population of freshwater fish harvesters includes one segment that lands a few hundred dollars’ worth of fish in a given year, another segment that lands tens of thousands of dollars’ worth, and other segments that fall somewhere in between.

The following chapter examines another sort of diversity between and among freshwater fish harvesters: namely, the total dockside value of all seafood landings realized by commercial fishermen who harvested freshwater fish. These data may be used to examine the share of their total seafood revenues derived from the freshwater fishery and to explore the extent to which they participated in other commercial fisheries in Louisiana.

Chapter 3. Volume and Nominal Dockside Value of All Seafood Landed in Louisiana by Those Who Landed Freshwater Fish

Many commercial fishermen in Louisiana have the opportunities to land many different species or types of seafood commercially. This section examines the volume and nominal dockside value of all seafood that freshwater fish harvesters landed in a given year. It concludes with an examination of revenues they derived from four other specific fisheries: oysters, blue crabs, shrimp, and certain saltwater fish.

The cumulative real dockside value of all seafood landed by the 735 commercial fishermen who landed freshwater fish in 2016 was \$13,922,908 (Table 14). The cumulative dockside value of their freshwater fish landings is \$4,654,891 (Table 2) or 33.4 percent of the value of all the seafood that they landed that year.

In previous years, the cumulative dockside value of all seafood landed by freshwater fish harvesters ranged between \$9.6 million and \$20.8 million with an average of \$13.9 million. In 11 of the 16 years between 2000 and 2015, the cumulative dockside value of freshwater fish represented about one-third of the cumulative dockside value of all seafood landed by freshwater fish harvesters.

Average Dockside Value of All Seafood Landings per Freshwater Fish-Harvesting Commercial Fisherman

For commercial fishermen who landed freshwater fish in 2016, the average real dockside value of all seafood landings was \$18,943 with a median of \$5,806 (Table 15). In previous years, the average real dockside value of all seafood landings ranged from \$14,873 in 2003 to \$24,948 in 2014.

Table 14. Nominal and Real Dockside Value of All Commercial Seafood Landings in Louisiana among Commercial Fishermen Who Landed Freshwater Fish

Year	Nominal Dockside Value	Real Dockside Value
2000	\$17,020,867	\$20,785,037
2001	\$15,659,860	\$18,698,340
2002	\$12,400,947	\$14,582,487
2003	\$10,823,629	\$12,478,244
2004	\$12,011,128	\$13,477,477
2005	\$11,772,538	\$12,797,628
2006	\$8,984,959	\$9,476,805
2007	\$12,408,309	\$12,747,389
2008	\$11,675,317	\$11,763,544
2009	\$11,186,209	\$11,186,209
2010	\$9,668,841	\$9,552,303
2011	\$13,221,511	\$12,797,900
2012	\$14,577,717	\$13,855,828
2013	\$17,712,024	\$16,564,130
2014	\$18,628,642	\$17,139,242
2015	\$15,320,491	\$13,927,972
2016	\$15,517,081	\$13,922,908
Real Value = Constant Inflation-Adjusted 2009 Dollars		

Table 15. Average and Median Real Dockside Value of All Seafood Landings among Commercial Fishermen Who Landed Freshwater Fish

Year	Average	Median	Standard Deviation	Coeff. of Variation
2000	\$18,090	\$5,203	41,271.92	228.15
2001	\$18,296	\$6,960	30,476.24	166.57
2002	\$15,580	\$6,477	24,671.49	158.36
2003	\$14,873	\$5,323	22,841.42	153.58
2004	\$15,368	\$4,445	26,229.09	170.68
2005	\$16,057	\$5,692	27,236.05	169.62
2006	\$14,901	\$4,035	32,860.12	220.53
2007	\$18,913	\$6,773	31,148.69	164.69
2008	\$16,926	\$6,318	27,075.28	159.96
2009	\$16,696	\$5,813	26,344.07	157.79
2010	\$15,114	\$5,647	23,588.56	156.07
2011	\$17,155	\$6,932	27,193.88	158.52
2012	\$17,212	\$5,216	29,096.50	169.05
2013	\$22,691	\$10,143	31,776.74	140.04
2014	\$24,948	\$9,723	37,585.81	150.66
2015	\$17,653	\$5,030	32,079.00	181.72
2016	\$18,943	\$5,806	33,885.57	178.88

Ratio of Freshwater Fish Value to Value of All Seafood Landings

The ratio of the dockside value of freshwater fish to the dockside value of all seafood landings was calculated by dividing the dockside value of freshwater fish landings by the dockside value of all seafood landings in a year for each commercial fisherman who reported freshwater fish landings. In 2016, the average for this ratio was 0.623. This indicates that for an average freshwater fish harvester that year freshwater fish landings represented 62.3 percent of the dockside value of all commercial seafood landings (Table 16).

Table 17 displays the percentage of all commercial fishermen who landed freshwater fish in a year for whom freshwater fish comprised various shares of their total seafood landings' dockside value. In 2016, for example, freshwater fish was less than 25 percent of total dockside value of all seafood landings for 31.8 percent of this population and between 25 percent and 74.9 percent for 12.8 percent. Freshwater fish constituted between 75 percent and 99.9 percent of total dockside value for 9.4 percent. Further, for 46.0 percent freshwater fish landings in 2016, this ratio was 1.00, which indicates that freshwater fish was the only type of seafood that they landed commercially.

In only four of the 17 years between 2000 and 2016, the ratio of freshwater fish to all seafood landings was 1.00 for a majority of the freshwater fish harvesters (2004- 2007). For the remainder of the study period, this ratio was 1.00 for about 42 percent to 49 percent.

Table 16. Average Ratio of Dockside Value of Freshwater Fish to Dockside Value of All Seafood Landings among Commercial Fishermen Who Landed Freshwater Fish

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Average	0.606	0.572	0.579	0.609	0.643	0.637	0.768	0.649	0.637
Year	2009	2010	2011	2012	2013	2014	2015	2016	
Average	0.614	0.630	0.584	0.634	0.576	0.585	0.645	0.623	

Table 17. Percentage of Commercial Fishermen Who Landed Freshwater Fish for Whom the Ratio of Dockside Value of Freshwater Fish to the Dockside Value of All Commercial Seafood Was In the Following Ranges

Year	Less than 0.25	0.25 – 0.499	0.50 – 0.749	0.75-0.999	1.00
2000	34.9%	5.9%	5.0%	9.4%	44.8%
2001	38.2%	6.7%	4.6%	8.0%	42.6%
2002	36.8%	7.3%	6.2%	7.7%	42.1%
2003	33.6%	7.9%	5.1%	7.8%	45.7%
2004	31.2%	5.7%	5.4%	7.0%	50.7%
2005	31.1%	8.2%	4.1%	6.7%	49.9%
2006	18.9%	5.2%	4.6%	11.5%	59.9%
2007	30.0%	7.0%	6.1%	6.4%	50.6%
2008	30.2%	8.9%	5.2%	7.1%	48.6%
2009	32.4%	9.4%	5.1%	6.1%	47.0%
2010	31.3%	8.1%	6.0%	5.9%	48.7%
2011	36.2%	7.9%	5.9%	8.2%	41.8%
2012	31.2%	8.0%	5.1%	6.7%	49.1%
2013	37.3%	8.5%	4.0%	7.7%	42.6%
2014	35.4%	9.5%	5.1%	5.7%	44.4%
2015	28.5%	9.3%	5.5%	9.3%	47.5%
2016	31.8%	8.0%	4.8%	9.4%	46.0%

Dockside Value of All Seafood Landed by Freshwater Fish-Harvesting Commercial Fisherman in Different Volume Categories

This section examines the dockside value of total seafood landings harvested by freshwater fish harvesters in each of the previously defined volume categories. It suggests that freshwater fish harvesters in the large volume category tended to have larger seafood landings overall than those in the other volume categories and derive a large share of their total seafood landings from freshwater fish.

Commercial Fishermen in the Small Volume Category

In 2015, the average real dockside value of all seafood landings for freshwater fish harvesters in the small volume category was \$15,415 (Table 18). In previous years, the category averages ranged from \$9,912 in 2008 to \$23,867 in 2013.

The average ratio of the dockside value of freshwater fish to all seafood landings for fishermen in this category in 2016 was 0.466 (Table 19). That year (as for other years in the study period), this distribution demonstrated a seemingly bimodal distribution. The ratio was equal to 1.00 for 42.0 percent of the fishermen in this category and less than 0.25 for 52.0 percent (Table 20).

Commercial Fishermen in the Lower-Middle Volume Category

The average real dockside value of all seafood landed by freshwater fish harvesters in the lower-middle volume category was \$16,673 in 2016. (The category average in previous years varied widely between \$5,297 in 2006 and \$23,765 in 2014.) The average ratio of the dockside value of freshwater fish to all seafood landings for commercial fishermen in this category in 2016 was 0.598. The ratio was equal to 1.00 for 50.8 percent and less than 0.25 for 37.6 percent (Table 21).

Table 18. Average Real Dockside Value of All Seafood Landed by Commercial Fishermen in Each Fish Volume Category: 2000 – 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	\$16,916	\$16,244	\$14,652	\$26,767
2001	\$18,879	\$14,866	\$14,062	\$26,090
2002	\$13,653	\$13,682	\$12,832	\$22,786
2003	\$15,875	\$8,862	\$12,818	\$22,213
2004	\$15,169	\$10,795	\$11,110	\$24,270
2005	\$16,777	\$10,924	\$9,866	\$25,838
2006	\$11,797	\$5,297	\$11,709	\$28,771
2007	\$16,379	\$13,527	\$15,187	\$29,201
2008	\$9,912	\$10,669	\$18,473	\$26,989
2009	\$12,113	\$13,644	\$16,081	\$24,681
2010	\$12,333	\$10,614	\$15,002	\$23,639
2011	\$14,056	\$10,109	\$15,881	\$29,894
2012	\$11,620	\$11,144	\$19,027	\$28,447
2013	\$23,867	\$17,208	\$18,143	\$31,070
2014	\$21,371	\$23,765	\$17,573	\$35,281
2015	\$16,427	\$12,125	\$12,774	\$29,496
2016	\$15,415	\$16,673	\$15,313	\$28,911

Table 19. Average Ratio of Freshwater Fish Value to Dockside Value of All Seafood Landings among Commercial Fishermen in Each Fish Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	0.421	0.576	0.714	0.858
2001	0.380	0.515	0.676	0.823
2002	0.405	0.532	0.618	0.827
2003	0.435	0.588	0.642	0.830
2004	0.482	0.649	0.654	0.841
2005	0.448	0.603	0.695	0.815
2006	0.628	0.774	0.782	0.880
2007	0.539	0.598	0.647	0.793
2008	0.546	0.605	0.619	0.758
2009	0.537	0.571	0.609	0.734
2010	0.556	0.589	0.610	0.784
2011	0.459	0.567	0.576	0.747
2012	0.523	0.636	0.616	0.768
2013	0.416	0.557	0.593	0.727
2014	0.472	0.492	0.615	0.718
2015	0.554	0.596	0.660	0.780
2016	0.466	0.598	0.654	0.805

Table 20. Percentage of Commercial Fishermen in the Small Volume Category Who Landed Freshwater Fish for Whom the Ratio of Dockside Value of Freshwater Fish to the Dockside Value of All Commercial Seafood Was In the Following Ranges

Year	Less than 0.25	0.25 – 0.499	0.50 – 0.749	0.75-0.999	1.00
2000	56.2%	3.9%	1.8%	1.3%	36.9%
2001	59.9%	4.0%	1.8%	0.9%	33.3%
2002	56.0%	5.0%	4.3%	0.4%	34.4%
2003	54.2%	4.4%	1.6%	2.4%	37.5%
2004	50.0%	3.7%	2.6%	0.4%	43.3%
2005	54.0%	2.8%	2.4%	1.4%	39.3%
2006	36.8%	1.2%	3.1%	1.2%	57.7%
2007	44.7%	1.9%	3.8%	1.3%	48.4%
2008	45.2%	2.6%	1.9%	0.0%	50.3%
2009	44.6%	2.7%	2.7%	1.6%	48.4%
2010	42.9%	3.6%	2.4%	1.2%	50.0%
2011	52.3%	3.6%	2.1%	0.5%	41.5%
2012	46.3%	3.9%	1.5%	1.0%	47.3%
2013	57.3%	3.4%	1.1%	0.6%	37.6%
2014	51.3%	3.8%	0.0%	0.6%	44.4%
2015	43.3%	2.9%	1.0%	1.4%	51.4%
2016	52.0%	3.5%	1.5%	1.0%	42.0%

Table 21. Percentage of Commercial Fishermen in the Lower-Middle Volume Category Who Landed Freshwater Fish for Whom the Ratio of Dockside Value of Freshwater Fish to the Dockside Value of All Commercial Seafood Was In the Following Ranges

Year	Less than 0.25	0.25 – 0.499	0.50 – 0.749	0.75-0.999	1.00
2000	37.9%	7.1%	4.4%	5.7%	45.0%
2001	45.8%	4.8%	4.4%	6.4%	38.7%
2002	42.9%	6.1%	6.1%	6.1%	38.9%
2003	36.7%	6.8%	6.3%	4.8%	45.4%
2004	32.0%	6.1%	2.6%	5.6%	53.7%
2005	35.9%	6.3%	4.4%	3.9%	49.5%
2006	18.5%	6.9%	2.7%	5.5%	66.4%
2007	37.2%	3.9%	6.7%	2.8%	49.4%
2008	36.2%	6.9%	1.7%	4.6%	50.6%
2009	38.0%	9.2%	3.1%	4.3%	45.4%
2010	40.2%	2.4%	3.6%	5.3%	48.5%
2011	41.2%	4.9%	5.9%	3.4%	44.6%
2012	32.6%	5.4%	4.5%	3.6%	54.0%
2013	41.1%	5.6%	4.4%	1.1%	47.8%
2014	49.0%	4.0%	3.3%	3.3%	40.4%
2015	35.9%	7.6%	3.0%	5.1%	48.5%
2016	37.6%	5.1%	2.5%	4.1%	50.8%

Commercial Fishermen in the Upper-Middle Volume Category

For freshwater fish harvesters in 2016, the average real dockside value of all seafood landings was \$15,313. The category average in earlier years had ranged between \$9,866 and \$19,027.

The average ratio of the dockside value of freshwater fish to all seafood landings in 2016 was 0.654. The ratio was less than 0.25 for 25.2 percent, between 0.25 and 0.499 for 20.3 percent, and equal to 1.00 for 45.4 percent of category freshwater fish harvesters in 2016 (Table 22).

Commercial Fishermen in the Large Volume Category

The average real dockside value among freshwater fish harvesters in the large category in 2016 was \$28,911. Category average earlier in the period ranged from \$22,213 in 2003 to \$35,281 in 2014.

The average ratio of the dockside value of freshwater fish to all seafood for large volume category freshwater fish harvesters in 2016 was 0.805. The ratio was less than 0.25 for 8.6 percent, between 0.25 and 0.499 for 20.6 percent, and between 0.75 and 0.99 for 25.1 percent (Table 23). The ratio was equal to 1.00 for 45.7 percent.

Table 22. Percentage of Commercial Fishermen Who Landed Freshwater Fish in the Upper-Middle Volume Category for Whom the Ratio of Dockside Value of Freshwater Fish to the Dockside Value of All Commercial Seafood Was In the Following Ranges

Year	Less than 0.25	0.25 – 0.499	0.50 – 0.749	0.75-0.999	1.00
2000	21.1%	9.7%	7.3%	11.7%	50.2%
2001	26.3%	9.5%	5.6%	10.8%	47.8%
2002	31.1%	12.4%	5.7%	8.3%	42.5%
2003	29.2%	11.5%	4.7%	12.0%	42.7%
2004	29.4%	5.3%	10.6%	8.2%	46.5%
2005	25.6%	9.1%	2.8%	6.8%	55.7%
2006	15.6%	6.5%	6.5%	14.3%	57.1%
2007	29.7%	9.5%	6.1%	5.4%	49.3%
2008	31.6%	10.7%	6.2%	7.9%	43.5%
2009	34.0%	10.4%	3.5%	8.3%	43.8%
2010	30.2%	12.8%	8.1%	7.4%	41.6%
2011	38.4%	9.3%	4.1%	8.7%	39.5%
2012	32.8%	9.1%	5.9%	9.1%	43.0%
2013	37.0%	7.7%	4.4%	8.8%	42.0%
2014	32.2%	9.6%	7.3%	6.8%	44.1%
2015	22.8%	15.3%	7.4%	9.0%	45.5%
2016	25.2%	12.9%	7.4%	9.2%	45.4%

Value of Oysters, Blue Crabs, Shrimp, and Reef Fish Landed by Freshwater Fish Harvesters

The ratio of the dockside value of freshwater fish over all seafood landings showed that a majority of all freshwater fish harvesters also participated in some other commercial fishery in Louisiana. This section utilizes trip ticket datasets for oysters, blue crabs, shrimp, and certain saltwater fish to study commercial freshwater fish harvesters who also participated in those commercial fisheries. By merging records in different datasets by commercial fishing license number, a unique identifier, this research identified (anonymously) the individuals who reported trip ticket landings for freshwater fish and any of these other types of seafood in any given year in the study period.

Table 23. Percentage of Commercial Fishermen Who Landed Freshwater Fish in the Large Volume Category for Whom the Ratio of Dockside Value of Freshwater Fish to the Dockside Value of All Commercial Seafood Was In the Following Ranges

Year	Less than 0.25	0.25 – 0.499	0.50 – 0.749	0.75-0.999	1.00
2000	7.9%	3.7%	8.9%	26.6%	52.8%
2001	8.5%	9.9%	8.0%	17.9%	55.7%
2002	9.4%	7.0%	9.4%	18.7%	55.6%
2003	7.4%	10.1%	9.0%	13.8%	59.8%
2004	7.3%	8.3%	7.8%	16.0%	60.7%
2005	7.4%	14.7%	6.9%	14.7%	56.4%
2006	5.2%	6.4%	5.8%	23.7%	59.0%
2007	10.7%	12.3%	7.5%	15.0%	54.6%
2008	11.1%	14.3%	10.1%	14.3%	50.3%
2009	13.4%	15.6%	10.6%	10.6%	49.7%
2010	8.9%	15.1%	11.0%	10.3%	54.8%
2011	10.7%	14.7%	11.9%	21.5%	41.2%
2012	12.0%	14.1%	8.9%	14.1%	51.0%
2013	15.2%	16.8%	5.8%	19.4%	42.9%
2014	15.1%	18.1%	8.5%	10.6%	47.7%
2015	10.4%	12.0%	10.9%	22.4%	44.3%
2016	8.6%	12.0%	8.6%	25.1%	45.7%

Commercial Fishermen Who Landed Freshwater Fish and Oysters

In 2016, four commercial fishermen who landed freshwater fish also landed oysters commercial (Table 24), equivalent to 0.5 percent of the population of freshwater fish harvesters that year, according to trip ticket records for both types of seafood. The number of freshwater fish harvesters who also landed oysters was modest throughout the period both in absolute and relative terms. The number of commercial fishermen landing freshwater fish and oysters during the study period peaked at 19 in 2000 and 2002 and was 11 or fewer in every year since 2003.

Among commercial fishermen who landed both oysters and freshwater fish in 2016, the average real dockside value for oysters was \$15,547, and the average real dockside value of freshwater fish was \$826. The average real dockside value of freshwater fish among those who did not land oysters in 2016 was \$6,363.

For most, if not all, of the freshwater fish harvesters who also landed oysters, the value of their oyster landings was larger than the value of their freshwater fish landings. This was true for three of the four fishermen who landed both oysters and freshwater fish in 2016 (Table 25).

Table 24. Number of Freshwater Fish Harvesters Who Landed Oysters and Average Real Dockside Value of Oyster Landings

	No.	Percentage of Freshwater Fish Harvesters	Freshwater Fish Harvesters Who Also Harvested Oysters		Freshwater Fish Harvesters Who Did Not Harvest Oysters
			Avg. Value of Oysters	Avg. Value of Freshwater Fish	Avg. Value of Freshwater Fish
2000	19	1.7%	\$8,242	\$640	\$4,902
2001	15	1.5%	\$3,795	\$443	\$4,961
2002	19	2.0%	\$5,933	\$1,281	\$5,009
2003	11	1.3%	\$2,785	\$2,980	\$4,893
2004	10	1.1%	\$3,845	\$7,139	\$5,171
2005	4	0.5%	\$10,446	\$735	\$5,604
2006	5	0.8%	\$8,861	\$3,432	\$7,524
2007	10	1.5%	\$14,839	\$2,233	\$6,734
2008	6	0.9%	\$1,441	\$630	\$6,247
2009	9	1.3%	\$5,336	\$823	\$5,164
2010	♠	♠	♠	♠	♠
2011	7	0.9%	\$5,504	\$835	\$5,758
2012	11	1.4%	\$9,743	\$1,512	\$5,544
2013	10	1.4%	\$6,903	\$4,902	\$6,038
2014	5	0.7%	\$7,955	\$2,663	\$6,773
2015	4	0.5%	\$12,367	\$734	\$6,306
2016	4	0.5%	\$15,547	\$826	\$6,363

♠ Values withheld to maintain confidentiality standards.

Table 25. Number of Commercial Fishermen Who Harvested Both Freshwater Fish and Oysters for Whom the Dockside Value of Oysters Was Larger than the Dockside Value of Freshwater Fish

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number	18	14	15	8	5	3	3	7	5
Year	2009	2010	2011	2012	2013	2014	2015	2016	
Number	7	♠	7	9	7	4	4	3	

♠ Value withheld to maintain confidentiality standards

Commercial Fishermen Who Landed Freshwater Fish and Blue Crabs

The number of commercial fishermen who landed both freshwater fish and blue crabs followed a general downward trend from 326 in 2000 to 107 in 2010 (Table 26) but increased over the following years to 152 in 2014 and 144 in 2015 (the last year for which blue crab landings data are available).

In 2000 and 2001, about one quarter of freshwater fish harvesters also landed blue crabs. Since 2008, the share of freshwater fish harvesters with blue crab landings has generally been between 16 and 19 percent.

Table 26. Number of Freshwater Fish Harvesters Who Landed Blue Crabs and Average Real Dockside Value of Blue Crab Landings

	No.	Percentage of Freshwater Fish Harvesters	Freshwater Fish Harvesters Who Also Blue Crabs		Freshwater Fish Harvesters Who Did Not Harvest Blue Crabs
			Avg. Value of Crabs	Avg. Value of Freshwater Fish	Avg. Value of Freshwater Fish
2000	326	28.4%	\$13,830	\$4,369	\$5,015
2001	245	24.0%	\$15,051	\$3,127	\$5,453
2002	180	19.2%	\$16,902	\$2,839	\$5,432
2003	184	21.9%	\$15,413	\$3,143	\$5,352
2004	145	16.5%	\$14,565	\$4,163	\$5,397
2005	136	17.1%	\$16,514	\$3,756	\$5,954
2006	110	17.3%	\$17,074	\$5,566	\$7,895
2007	145	21.5%	\$20,708	\$5,793	\$6,907
2008	115	16.5%	\$12,124	\$5,985	\$6,241
2009	115	17.2%	\$19,150	\$3,664	\$5,405
2010	107	16.9%	\$14,468	\$4,105	\$4,914
2011	146	19.6%	\$11,252	\$5,046	\$5,874
2012	156	19.4%	\$17,281	\$5,134	\$5,574
2013	145	19.9%	\$17,463	\$5,182	\$6,231
2014	152	22.1%	\$26,160	\$5,754	\$7,024
2015	144	18.3%	\$21,454	\$7,103	\$6,093

For commercial fishermen who landed both blue crabs and freshwater fish in 2015, the average real dockside of blue crabs was \$21,454, and the average real dockside value of freshwater fish was \$7,103. The average real dockside value of freshwater fish among freshwater fish harvesters who did not land blue crabs in 2015 was \$6,094.

In 2015, the dockside value of blue crab landings was greater than the dockside value of freshwater fish for 101 of the 144 (70.1 percent) commercial fishermen who landed both (Table 27). In every other year for the study period, the value of crabs was greater than the value of freshwater fish for the majority of the commercial fishermen who harvested both seafood types.

Table 27. Number of Commercial Fishermen Who Harvested Both Freshwater Fish and Blue Crabs for Whom the Dockside Value of Blue Crabs Was Larger than the Dockside Value of Freshwater Fish

Year	2000	2001	2002	2003	2004	2005	2006	2007
Number	226	181	137	135	104	98	74	101
Year	2008	2009	2010	2011	2012	2013	2014	2015
Number	65	85	74	91	108	94	115	101

Freshwater Fish Harvesters Who Harvested Blue Crabs by Volume Category

In 2015, just under one-fifth of the freshwater fish harvesters in each volume category also landed blue crabs (Table 28). The average real dockside value of blue crabs among commercial fishermen who landed both freshwater fish and blue crabs (Table 29) was \$21,985 for the small volume category, \$25,895 in the lower-middle volume category, \$19,418 in the upper-middle volume category, and \$18,413 in the large volume category.

Table 28. Freshwater Fish Harvesters Who Also Harvested Blue Crabs by Fish Volume Category

Year	Number and Percentage of Fishermen in Specified Category				
		Small	Lower Middle	Upper Middle	Large
2000	Number	129	78	70	49
	Percent	33.1%	26.2%	28.3%	22.9%
2001	Number	99	72	46	28
	Percent	30.3%	28.7%	19.8%	13.2%
2002	Number	73	54	37	16
	Percent	25.9%	21.9%	19.2%	7.5%
2003	Number	75	46	40	23
	Percent	29.9%	22.2%	20.8%	12.2%
2004	Number	57	36	30	22
	Percent	21.1%	15.6%	17.7%	10.7%
2005	Number	50	32	28	26
	Percent	23.7%	15.5%	15.9%	12.8%
2006	Number	36	20	27	27
	Percent	22.1%	13.7%	17.5%	15.6%
2007	Number	43	49	24	29
	Percent	27.0%	27.2%	16.2%	15.5%
2008	Number	28	29	28	30
	Percent	18.1%	16.7%	15.8%	15.9%
2009	Number	44	34	20	17
	Percent	23.9%	20.9%	13.9%	9.5%
2010	Number	29	39	26	13
	Percent	17.3%	23.1%	17.5%	8.9%
2011	Number	44	36	36	30
	Percent	22.8%	17.7%	20.9%	17.0%
2012	Number	45	43	34	34
	Percent	22.2%	19.2%	18.3%	17.7%
2013	Number	45	37	31	32
	Percent	25.3%	20.6%	17.1%	16.8%
2014	Number	42	37	37	36
	Percent	26.3%	24.5%	20.9%	18.1%
2015	Number	40	35	33	36
	Percent	19.1%	17.7%	17.5%	18.8%
Small Volume Category = Commercial fishermen with less than 560 pounds of freshwater fish landings Lower-Middle Volume Category = Commercial fishermen with 560 to 2,799 pounds of freshwater fish landings Upper-Middle Volume Category = Commercial fishermen with 2,800 to 11,999 pounds of freshwater fish landings Large Volume Category = Commercial fishermen with more than 12,000 pounds of freshwater fish landings					

The average real dockside value of blue crabs among freshwater fish harvesters in the small volume category in 2015 was \$21,985. The average was \$25,895 for the lower-middle volume category, \$19,418 for the upper-middle volume category, and \$18,413 for the large volume category.

Commercial Fishermen Who Landed Freshwater Fish and Shrimp

In 2015, the last year for which shrimp data are available, 105 commercial fishermen who landed freshwater fish also landed shrimp commercially (Table 30), equivalent to approximately 13 percent of the year's population of freshwater fish harvesters. The number of commercial fishermen who landed both shrimp and freshwater fish dropped from a period high of 339 in 2000 to a period low of 63 in 2006, then subsequently rose to approximately 100 in each of the last five years of the study period.

Of the commercial fishermen who landed both shrimp and freshwater fish in 2015, the average real dockside value for shrimp was \$19,647, and the average real dockside value of freshwater fish was \$4,191. The average real dockside value of freshwater fish among freshwater fish harvesters who did not land shrimp was \$6,598.

For 73 of the 105 of the freshwater fish harvesters who harvested shrimp in 2015 (69.5 percent), the real dockside value of shrimp was greater than that of freshwater fish (Table 31). The same was true for at least 69.6 percent of the freshwater fish harvesters with shrimp landings in every other year since 2000.

Table 29. Average Real Dockside Value of Blue Crab Landings among Freshwater Fish Harvesters Who Also Landed Blue Crabs by Fish Volume Category

Year	Small	Lower Middle	Upper Middle	Large
2000	\$12,062	\$15,213	\$11,647	\$19,398
2001	\$13,436	\$12,196	\$20,371	\$19,361
2002	\$13,839	\$17,219	\$18,264	\$26,661
2003	\$13,891	\$15,233	\$19,376	\$13,846
2004	\$11,751	\$15,351	\$19,779	\$13,460
2005	\$15,671	\$20,473	\$11,862	\$18,271
2006	\$13,938	\$12,548	\$23,180	\$18,503
2007	\$23,978	\$17,699	\$19,466	\$21,970
2008	\$8,445	\$9,192	\$20,506	\$10,568
2009	\$15,029	\$17,507	\$32,777	\$17,072
2010	\$5,828	\$18,477	\$21,010	\$8,630
2011	\$13,158	\$8,570	\$13,099	\$9,457
2012	\$10,309	\$19,257	\$19,069	\$22,222
2013	\$15,098	\$18,133	\$23,290	\$14,368
2014	\$21,838	\$34,653	\$21,930	\$26,822
2015	\$21,985	\$25,895	\$19,418	\$18,413

Table 30. Number of Freshwater Fish Harvesters Who Landed Shrimp and Average Real Dockside Value of Shrimp Landings

	No.	Percentage of Freshwater Fish Harvesters	Freshwater Fish Harvesters Who Also Shrimp		Freshwater Fish Harvesters Who Did Not Harvest Shrimp
			Avg. Value of Shrimp	Avg. Value of Freshwater Fish	Avg. Value of Freshwater Fish
2000	339	29.5%	\$21,055	\$3,635	\$5,333
2001	228	22.3%	\$23,012	\$2,182	\$5,674
2002	170	18.2%	\$17,730	\$1,953	\$5,595
2003	150	17.9%	\$14,361	\$2,686	\$5,343
2004	150	17.1%	\$19,911	\$2,637	\$5,721
2005	109	13.7%	\$22,493	\$2,931	\$5,999
2006	63	9.9%	\$30,924	\$2,932	\$7,994
2007	79	11.7%	\$21,454	\$3,976	\$7,025
2008	75	10.8%	\$23,401	\$3,386	\$6,539
2009	88	13.1%	\$15,840	\$3,659	\$5,325
2010	78	12.3%	\$21,950	\$4,658	\$4,793
2011	101	13.5%	\$22,392	\$3,858	\$6,003
2012	107	13.3%	\$24,038	\$3,859	\$5,739
2013	108	14.8%	\$27,477	\$4,577	\$6,273
2014	104	15.1%	\$34,585	\$4,094	\$7,215
2015	105	13.3%	\$19,647	\$4,191	\$6,598

Table 31. Number of Commercial Fishermen Who Harvested Both Freshwater Fish and Shrimp for Whom the Dockside Value of Shrimp Was Larger than the Dockside Value of Freshwater Fish

Year	2000	2001	2002	2003	2004	2005	2006	2007
Number	251	183	137	111	119	96	52	55
Year	2008	2009	2010	2011	2012	2013	2014	2015
Number	59	64	57	82	81	88	86	73

Freshwater Fish Harvesters Who Harvested Shrimp by Volume Category

In 2015 and other years during the study period, a percentage of freshwater fish harvesters with shrimp landings was lower in the large volume category than for other categories. The percentage of freshwater fish harvesters who had shrimp landings was 18.1 percent in the small volume category, 12.6 percent in the lower-middle volume category, and 15.3 percent in the upper-middle volume category, but only 6.8 percent in the large category (Table 32).

The average real dockside value of shrimp landings for freshwater fish harvesters in the small volume category who also harvested shrimp was \$34,528 in 2015 (Table 33). The averages were \$12,297 in the lower-middle volume category, \$10,886 in the upper-middle volume category, and \$9,830 in the large volume category.

Table 32. Freshwater Fish Harvesters Who Also Harvested Shrimp by Fish Volume Category

Number and Percentage of Fishermen in Specified Category					
Year		Small	Lower Middle	Upper Middle	Large
2000	Number	147	93	66	33
	Percent	37.7%	31.2%	26.7%	15.4%
2001	Number	120	58	37	13
	Percent	36.7%	23.1%	16.0%	6.1%
2002	Number	83	49	29	9
	Percent	29.4%	19.8%	15.0%	4.2%
2003	Number	71	35	35	9
	Percent	28.3%	16.9%	18.2%	4.8%
2004	Number	76	41	19	14
	Percent	28.2%	17.8%	11.2%	6.8%
2005	Number	55	30	17	7
	Percent	26.1%	14.6%	9.7%	3.4%
2006	Number	30	16	10	7
	Percent	18.4%	11.0%	6.5%	4.1%
2007	Number	30	25	12	12
	Percent	18.9%	13.9%	8.1%	6.4%
2008	Number	28	19	18	10
	Percent	18.1%	10.9%	10.2%	5.3%
2009	Number	42	18	15	13
	Percent	22.8%	11.0%	10.4%	7.3%
2010	Number	28	19	20	11
	Percent	16.7%	11.2%	13.4%	7.5%
2011	Number	39	23	25	14
	Percent	20.2%	11.3%	14.5%	7.9%
2012	Number	37	34	20	16
	Percent	18.2%	15.2%	10.8%	8.3%
2013	Number	47	28	18	15
	Percent	26.4%	15.6%	9.9%	7.9%
2014	Number	34	32	21	17
	Percent	21.3%	21.2%	11.9%	8.5%
2015	Number	38	25	29	13
	Percent	18.1%	12.6%	15.3%	6.8%

Table 33. Average Real Dockside Value of Shrimp Landings among Freshwater Fish Harvesters Who Also Landed Shrimp by Fish Volume Category

Year	Small	Lower Middle	Upper Middle	Large
2000	\$25,065	\$18,419	\$21,494	\$9,745
2001	\$25,125	\$23,820	\$15,969	\$19,942
2002	\$17,896	\$22,494	\$11,633	\$9,900
2003	\$20,194	\$7,427	\$10,058	\$12,041
2004	\$27,050	\$15,238	\$8,468	\$10,377
2005	\$25,645	\$17,776	\$17,220	\$30,754
2006	\$40,485	\$11,567	\$33,910	\$29,928
2007	\$26,865	\$11,669	\$35,394	\$14,371
2008	\$24,780	\$18,877	\$29,087	\$17,896
2009	\$16,856	\$8,537	\$18,314	\$19,812
2010	\$24,300	\$19,183	\$21,623	\$21,340
2011	\$17,638	\$22,622	\$28,760	\$23,883
2012	\$22,329	\$19,420	\$34,620	\$24,575
2013	\$38,130	\$17,268	\$27,845	\$12,715
2014	\$41,893	\$34,369	\$32,022	\$23,542
2015	\$34,528	\$12,297	\$10,886	\$9,830

Commercial Fishermen Who Landed Freshwater Fish and Reef Fish

The number of commercial fishermen who landed both freshwater fish and reef fish² was modest throughout the study period. In 2015, the last year for which reef fish landings data are available, six freshwater fish harvesters also landed reef fish (Table 34). Among these, the average real dockside value of reef fish landings was \$10,219 and the real dockside value was \$19,456. The average real dockside value of freshwater fish landings among freshwater fish harvesters who did not land reef fish was \$6,177.

² The term “reef fish” refers to a complex of fishes that includes snappers, groupers, wrasses, tilefish, trigger fish, and hogfish

Table 34. Number of Freshwater Fish Harvesters Who Landed Reef Fish and Average Real Dockside Value of Reef Fish Landings

	No.	Percentage of Freshwater Fish Harvesters	Freshwater Fish Harvesters Who Also Harvested Reef Fish		Freshwater Fish Harvesters Who Did Not Harvest Reef Fish
			Avg. Value of Reef Fish	Avg. Value of Freshwater Fish	Avg. Value of Freshwater Fish
2000	15	1.3%	\$3,806	\$1,840	\$4,872
2001	20	2.0%	\$2,321	\$2,736	\$4,938
2002	13	1.4%	\$9,600	\$663	\$4,994
2003	26	3.1%	\$4,864	\$3,000	\$4,927
2004	16	1.8%	\$16,006	\$2,086	\$5,251
2005	16	2.0%	\$4,766	\$2,850	\$5,635
2006	3	0.5%	\$1,117	\$25,912	\$7,405
2007	7	1.0%	\$3,544	\$8,646	\$6,647
2008	11	1.6%	\$3,099	\$3,770	\$6,237
2009	6	0.9%	\$2,819	\$3,074	\$5,124
2010	4	0.6%	\$8,093	\$5,412	\$4,773
2011	8	1.1%	\$24,131	\$11,219	\$5,653
2012	7	0.9%	\$2,770	\$18,843	\$5,372
2013	4	0.5%	\$24,678	\$13,446	\$5,982
2014	4	0.6%	\$9,864	\$18,508	\$6,674
2015	6	0.8%	\$10,219	\$19,456	\$6,177

Conclusion

The main body of this report presented the descriptive statistics for a variety of parameters pertaining to commercial freshwater fish, a category containing many different species of fish. Most of the landings, however, are associated with two types of freshwater fish: catfish and buffalo (or buffalo fish). In all but 14 of the 17 years in the study period, the combined landings of these two types were at least 60 percent of the volume and dockside value of all freshwater fish. Appendices to this report include statistics from trip ticket records specific to catfish (Appendix 1) and buffalo (Appendix 2).

Appendix 1. Commercial Catfish Harvesters

Number of Commercial Fishermen with Catfish Landings

The label “catfish” is here applied to a group of different species, including the blue catfish, the channel catfish, and the flathead catfish. In 2016, 549 commercial fishermen in Louisiana landed catfish (Table 35), a number equivalent to 74.7 percent (Table 38) of all freshwater fish harvesters that year (Table 1). In previous years, the number of catfish harvesters had declined from a period maximum of 852 in 2000 to a period minimum of 394 in 2009 but increased somewhat thereafter. Throughout the study period, the number of catfish harvesters was equal to roughly 60 to 70 percent of the number of all freshwater fish harvesters.

Volume and Dockside Value of Catfish Landings in Louisiana

The volume of commercial catfish landings in Louisiana in 2016 was 4,985,708 pounds (Table 36) or roughly 42.0 percent (Table 37) of the total volume of all freshwater fish landed that year (Table 2). In previous years the volume varied between a minimum of 3,001,789 pounds (28 percent of the volume of all freshwater fish) in 2009 and a maximum of 6,310,327 pounds (53.2 percent of the volume of all freshwater fish) in 2000.

The real dockside value of commercial catfish landings in Louisiana was \$2,375,987 (Table 36), a sum equal to 51.0 percent of the dockside value (Table 37) of all freshwater fish (Table 2). The real dockside value had previously ranged between a minimum of \$1,412,808 in 2010 (46.8 percent of total freshwater fish landings) and a maximum of \$3,821,091 (68.8 percent of total freshwater fish landings) in 2000.

Age of Commercial Fishermen Who Landed Catfish

The average age of a commercial catfish harvester in 2016 was 49.6 years old (Table 38). This was the lowest average age since 2011.

Place of Residence for Commercial Fishermen Who Landed Catfish

In 2016, commercial catfish harvesters resided in 50 different Louisiana parishes. A majority (51.6 percent) resided in six parishes in southern Louisiana: St. Mary, St. Charles, Iberia, St. Martin, Plaquemines, and Assumption (Table 39).

Table 35. Number of Commercial Fishermen Reporting Catfish Landings in Louisiana

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number	852	746	619	499	539	505	428	422	404
Year	2009	2010	2011	2012	2013	2014	2015	2016	
Number	394	417	542	567	477	491	567	549	

Table 36. Volume, Nominal Dockside Value, and Real Dockside Value of Commercial Catfish Landings in Louisiana

Year	Volume	Nominal Dockside Value	Real Dockside Value
2000	6,310,327	\$3,129,092	\$3,821,091
2001	5,673,050	\$2,681,661	\$3,201,983
2002	4,937,803	\$2,293,807	\$2,697,327
2003	3,906,997	\$1,797,828	\$2,072,663
2004	5,183,906	\$2,371,962	\$2,661,537
2005	4,762,951	\$2,163,565	\$2,351,956
2006	4,690,822	\$2,278,714	\$2,403,454
2007	4,745,615	\$2,356,974	\$2,421,383
2008	4,061,849	\$1,977,862	\$1,992,808
2009	3,001,789	\$1,460,161	\$1,460,161
2010	3,076,181	\$1,430,044	\$1,412,808
2011	4,747,451	\$2,449,598	\$2,371,115
2012	5,139,477	\$2,582,708	\$2,454,813
2013	4,492,065	\$2,232,381	\$2,087,703
2014	4,454,255	\$2,391,998	\$2,200,753
2015	4,987,982	\$2,850,267	\$2,591,199
2016	4,985,708	\$2,648,037	\$2,375,987
Volume = Pounds		Real Value = Constant Inflation-Adjusted 2009 Dollars	

Table 37. Number of Commercial Catfish Harvesters as a Percentage of All Commercial Fishermen Who Landed Freshwater Fish and the Volume and Value of Catfish Landings as a Percentage of Total Freshwater Fish Landings in Louisiana

Year	Percentage of Fishermen	Percentage of Volume	Percentage of Value
2000	74.2%	53.2%	68.8%
2001	73.0%	42.8%	64.0%
2002	66.1%	39.2%	58.4%
2003	59.5%	34.8%	50.8%
2004	61.5%	43.1%	58.4%
2005	63.4%	40.5%	52.9%
2006	67.3%	40.0%	50.4%
2007	62.6%	38.6%	53.9%
2008	58.1%	34.4%	46.3%
2009	58.8%	28.9%	42.7%
2010	66.0%	34.4%	46.8%
2011	72.7%	41.4%	55.6%
2012	70.4%	42.7%	55.6%
2013	65.3%	36.4%	47.5%
2014	71.5%	36.4%	47.5%
2015	71.9%	39.4%	52.3%
2016	74.7%	41.3%	51.0%

Table 38. Average and Median Age of Commercial Fishermen Who Landed Catfish

Year	Average	Median
2000	47.2	46.0
2001	49.4	49.0
2002	50.3	50.0
2003	50.3	50.0
2004	51.2	51.0
2005	50.8	50.0
2006	52.2	52.0
2007	51.2	51.0
2008	52.7	52.0
2009	52.8	52.0
2010	51.7	51.0
2011	49.6	50.0
2012	51.5	52.0
2013	51.6	52.0
2014	52.9	53.0
2015	51.7	52.0
2016	49.6	52.0

Average Volume of Catfish per Catfish-Harvesting Commercial Fisherman

In 2016, the average volume of catfish landed per catfish harvester was 8,917.5 pounds (Table 40). In previous years, the average volume per catfish harvesters ranged between 7,406.5 pounds per fisherman in 2000 and 11,345.5 pounds per fisherman in 2011. Since 2012, the average has been approximately 9,000 pounds per fisherman.

Average Dockside Value of Catfish per Catfish-Harvesting Commercial Fisherman

The average real dockside value per fisherman for catfish in 2016 was \$4,328, fairly typical for an average during the study period (Table 41). The average real dockside value was generally between \$4,000 and \$5,000 in all but four of the previous sixteen years in the study period.

Average Real Dockside Value per Pound of Catfish

An estimate of the real dockside value per pound of catfish was computed for each catfish harvester by dividing the dockside value of catfish landings by the volume (Table 42). The average real dockside value per pound in 2016 was \$0.58 per pound. The median was \$0.44 per pound.

Table 39. Parish or State of Residence for Commercial Fishermen Who Landed Catfish

Area	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Acadia	3	3	3	6	3	5	♠	6	5	4	5	7	8	9	7	6	13
	0.4%	0.4%	0.5%	1.2%	0.6%	1.0%	♠	1.4%	1.2%	1.0%	1.2%	1.3%	1.4%	1.9%	1.4%	1.1%	2.4%
Ascension	8	8	6	♥	7	3	3	♥	♥	3	♥	3	3	♥	3	5	5
	0.9%	1.1%	1.0%	♥	1.3%	0.6%	0.7%	♥	♥	0.8%	♥	0.6%	0.5%	♥	0.6%	0.9%	0.9%
Assumption	72	46	45	37	33	33	36	22	26	20	33	46	35	45	45	46	27
	8.5%	6.2%	7.3%	7.4%	6.1%	6.5%	8.4%	5.2%	6.4%	5.1%	7.9%	8.5%	6.2%	9.4%	9.2%	8.1%	4.9%
Avoyelles	44	39	59	30	37	43	40	33	30	23	30	31	33	22	24	24	26
	5.2%	5.2%	9.5%	6.0%	6.9%	8.5%	9.3%	7.8%	7.4%	5.8%	7.2%	5.7%	5.8%	4.6%	4.9%	4.2%	4.7%
Caddo	7	7	7	5	8	5	5	7	8	6	5	8	7	6	5	5	5
	0.8%	0.9%	1.1%	1.0%	1.5%	1.0%	1.2%	1.7%	2.0%	1.5%	1.2%	1.5%	1.2%	1.3%	1.0%	0.9%	0.9%
Calcasieu	12	11	12	10	5	5	5	♠	5	4	5	10	17	10	5	6	5
	1.4%	1.5%	1.9%	2.0%	0.9%	1.0%	1.2%	♠	1.2%	1.0%	1.2%	1.8%	3.0%	2.1%	1.0%	1.1%	0.9%
Catahoula	28	18	17	11	10	9	14	11	10	14	15	15	17	15	16	14	17
	3.3%	2.4%	2.7%	2.2%	1.9%	1.8%	3.3%	2.6%	2.5%	3.6%	3.6%	2.8%	3.0%	3.1%	3.3%	2.5%	3.1%
Concordia	22	20	16	14	16	10	11	11	13	15	13	11	9	5	10	12	6
	2.6%	2.7%	2.6%	2.8%	3.0%	2.0%	2.6%	2.6%	3.2%	3.8%	3.1%	2.0%	1.6%	1.0%	2.0%	2.1%	1.1%
Iberia	11	15	9	10	10	12	10	15	13	17	16	19	23	27	22	29	37
	1.3%	2.0%	1.5%	2.0%	1.9%	2.4%	2.3%	3.6%	3.2%	4.3%	3.8%	3.5%	4.1%	5.7%	4.5%	5.1%	6.7%
Iberville	55	62	45	37	38	38	40	24	23	19	16	25	24	18	28	32	18
	6.5%	8.3%	7.3%	7.4%	7.1%	7.5%	9.3%	5.7%	5.7%	4.8%	3.8%	4.6%	4.2%	3.8%	5.7%	5.6%	3.3%
Jefferson	37	33	18	11	10	14	5	5	7	6	5	6	17	14	18	12	16
	4.3%	4.4%	2.9%	2.2%	1.9%	2.8%	1.2%	1.2%	1.7%	1.5%	1.2%	1.1%	3.0%	2.9%	3.7%	2.1%	2.9%
Lafourche	38	50	30	22	28	32	20	25	16	23	23	24	24	26	31	30	26
	4.5%	6.7%	4.8%	4.4%	5.2%	6.3%	4.7%	5.9%	4.0%	5.8%	5.5%	4.4%	4.2%	5.5%	6.3%	5.3%	4.7%
Livingston	6	8	5	4	3	♥	4	♥	♥	3	3	3	5	5	6	9	7
	0.7%	1.1%	0.8%	0.8%	0.6%	♥	0.9%	♥	♥	0.8%	0.7%	0.6%	0.9%	1.0%	1.2%	1.6%	1.3%

Table 39. Parish or State of Residence for Commercial Fishermen Who Landed Catfish (Continued)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Plaquemines	47	47	27	31	24	38	3	30	32	20	27	40	35	25	32	25	32
	5.5%	6.3%	4.4%	6.2%	4.5%	7.5%	0.7%	7.1%	7.9%	5.1%	6.5%	7.4%	6.2%	5.2%	6.5%	4.4%	5.8%
Pointe Coupee	6	6	6	4	5	5	7	7	3	4	5	8	7	5	5	6	8
	0.7%	0.8%	1.0%	0.8%	0.9%	1.0%	1.6%	1.7%	0.7%	1.0%	1.2%	1.5%	1.2%	1.0%	1.0%	1.1%	1.5%
Rapides	15	11	12	5	7	8	7	♣	3	3	5	8	5	3	4	8	7
	1.8%	1.5%	1.9%	1.0%	1.3%	1.6%	1.6%	♣	0.7%	0.8%	1.2%	1.5%	0.9%	0.6%	0.8%	1.4%	1.3%
St. Charles	56	52	44	39	30	29	20	26	22	19	28	35	36	31	41	62	60
	6.6%	7.0%	7.1%	7.8%	5.6%	5.7%	4.7%	6.2%	5.4%	4.8%	6.7%	6.5%	6.3%	6.5%	8.4%	10.9%	10.9%
St. James	19	20	13	13	14	12	11	13	12	10	14	13	12	12	10	11	10
	2.2%	2.7%	2.1%	2.6%	2.6%	2.4%	2.6%	3.1%	3.0%	2.5%	3.4%	2.4%	2.1%	2.5%	2.0%	1.9%	1.8%
St. Landry	9	8	8	8	9	6	6	7	14	8	6	9	6	5	8	7	8
	1.1%	1.1%	1.3%	1.6%	1.7%	1.2%	1.4%	1.7%	3.5%	2.0%	1.4%	1.7%	1.1%	1.0%	1.6%	1.2%	1.5%
St. Martin	39	32	28	18	21	22	22	19	18	20	20	47	39	30	26	28	33
	4.6%	4.3%	4.5%	3.6%	3.9%	4.4%	5.1%	4.5%	4.5%	5.1%	4.8%	8.7%	6.9%	6.3%	5.3%	4.9%	6.0%
St. Mary	144	106	92	84	101	84	73	60	59	67	63	95	95	71	60	84	93
	16.9%	14.2%	14.9%	16.8%	18.7%	16.6%	17.1%	14.2%	14.6%	17.0%	15.1%	17.5%	16.8%	14.9%	12.2%	14.8%	16.9%
St. Tammany	7	3	♥	♥	5	5	♥	♥	3	0	♥	♥	12	14	8	8	6
	0.8%	0.4%	♥	♥	0.9%	1.0%	♥	♥	0.7%	0.0%	♥	♥	2.1%	2.9%	1.6%	1.4%	1.1%
Tangipahoa	10	11	7	8	10	7	5	6	5	11	6	8	10	10	6	6	4
	1.2%	1.5%	1.1%	1.6%	1.9%	1.4%	1.2%	1.4%	1.2%	2.8%	1.4%	1.5%	1.8%	2.1%	1.2%	1.1%	0.7%
Terrebonne	13	13	7	6	13	4	8	5	3	7	8	7	11	4	8	16	16
	1.5%	1.7%	1.1%	1.2%	2.4%	0.8%	1.9%	1.2%	0.7%	1.8%	1.9%	1.3%	1.9%	0.8%	1.6%	2.8%	2.9%
Vermilion	36	21	21	16	17	13	16	18	19	17	15	15	14	15	13	13	14
	4.2%	2.8%	3.4%	3.2%	3.2%	2.6%	3.7%	4.3%	4.7%	4.3%	3.6%	2.8%	2.5%	3.1%	2.6%	2.3%	2.6%

Table 39. Parish or State of Residence for Commercial Fishermen Who Landed Catfish (Concluded)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Other North Louisiana	20	18	18	13	17	16	14	19	23	15	11	11	16	15	15	19	16
	2.3%	2.4%	2.9%	2.6%	3.2%	3.2%	3.3%	4.5%	5.7%	3.8%	2.6%	2.0%	2.8%	3.1%	3.1%	3.4%	2.9%
Other Central	40	30	27	17	23	18	17	22	12	13	14	12	12	9	9	10	8
	4.7%	4.0%	4.4%	3.4%	4.3%	3.6%	4.0%	5.2%	3.0%	3.3%	3.4%	2.2%	2.1%	1.9%	1.8%	1.8%	1.5%
Other Southeastern	8	12	10	16	9	12	8	13	11	9	14	13	16	14	13	15	15
	0.9%	1.6%	1.6%	3.2%	1.7%	2.4%	1.9%	3.1%	2.7%	2.3%	3.4%	2.4%	2.8%	2.9%	2.6%	2.6%	2.7%
Other Southwestern	19	17	20	18	15	12	11	12	6	8	7	7	8	7	9	11	8
	2.2%	2.3%	3.2%	3.6%	2.8%	2.4%	2.6%	2.8%	1.5%	2.0%	1.7%	1.3%	1.4%	1.5%	1.8%	1.9%	1.5%
Out of State	5	6	3	4	4	†	3	4	†	†	†	3	†	†	0	0	†
	0.6%	0.8%	0.5%	0.8%	0.7%	†	0.7%	0.9%	†	†	†	0.6%	†	†	0.0%	0.0%	†
Unknown or Confidential	16	13	4	2	7	5	4	2	3	6	5	3	11	5	4	8	3
	1.9%	1.7%	0.6%	0.4%	1.3%	1.0%	0.9%	0.5%	0.7%	1.5%	1.2%	0.6%	1.9%	1.0%	0.8%	1.4%	0.5%
<p>The “Other North Louisiana” category includes Bienville, Bossier, Claiborne, East Carroll, Lincoln, Madison, Morehouse, Ouachita, Richland, Union, Webster, and West Carroll parishes.</p> <p>The “Other Central Louisiana” category includes Caldwell, De Soto, Franklin, Grant, Jackson, La Salle, Natchitoches, Red River, Sabine, Tensas, and Winn parishes.</p> <p>The “Other Southeastern” category includes East Baton Rouge, East Feliciana, Orleans, St. Bernard, St. John the Baptist, Washington, and West Feliciana parishes.</p> <p>The “Other Southwestern Parishes” category includes Allen, Beauregard, Cameron, Evangeline, Jefferson Davis, Lafayette, Vernon, and West Baton Rouge parishes.</p> <p>♣ Value added to the “Other Central Louisiana” category to maintain confidentiality standards.</p> <p>♠ Values added to the “Other Southwestern Louisiana” category to maintain confidentiality standards.</p> <p>♥ Values added to the “Other Southeaster Louisiana” category to maintain confidentiality standards.</p> <p>† Values added to the “Unknown or Confidential” category to maintain confidentiality standards.</p>																	

Table 40. Average and Median Volume of Catfish Among Commercial Fishermen Who Landed Catfish

Variable	Average	Median	Standard Deviation	Coeff. of Variation
2000	7,406.5	1,388	17,216.3	232.45
2001	7,604.6	1,431	16,770.8	220.53
2002	7,977.1	1,578	17,495.5	219.32
2003	7,829.7	1,385	17,636.9	225.26
2004	9,617.6	1,758	21,297.9	221.45
2005	9,431.6	1,613	21,078.4	223.49
2006	10,959.9	2,062	30,887.9	281.83
2007	11,245.5	1,979	31,684.4	281.75
2008	10,054.1	1,821	30,870.3	307.04
2009	7,618.8	1,562	15,163.6	199.03
2010	7,376.9	1,317	16,381.6	222.06
2011	8,759.1	1,575	27,611.4	315.23
2012	9,064.3	1,358	29,586.6	326.41
2013	9,417.3	1,663	25,627.8	272.13
2014	9,071.8	1,682	23,430.4	258.28
2015	8,797.2	1,426	25,629.5	291.34
2016	8,917.5	1,223	27,642.7	309.98

Table 41. Average and Median Real Dockside Value of Catfish among Commercial Fishermen Who Landed Catfish

Variable	Average	Median	Standard Deviation	Coeff. of Variation
2000	\$4,485	\$849	10,762.6	239.98
2001	\$4,292	\$822	9,579.8	223.19
2002	\$4,358	\$916	9,786.0	224.58
2003	\$4,154	\$672	9,332.5	224.68
2004	\$4,938	\$910	10,858.6	219.90
2005	\$4,657	\$764	10,563.5	226.81
2006	\$5,616	\$1,045	16,026.5	285.40
2007	\$5,738	\$1,002	16,678.9	290.68
2008	\$4,933	\$913	15,756.3	319.43
2009	\$3,706	\$742	7,159.2	193.18
2010	\$3,388	\$686	7,178.9	211.89
2011	\$4,375	\$773	13,772.9	314.83
2012	\$4,329	\$772	13,949.1	322.19
2013	\$4,377	\$765	11,631.3	265.75
2014	\$4,482	\$785	11,233.2	250.62
2015	\$4,570	\$727	13,189.8	288.62
2016	\$4,328	\$615	13,302.6	307.37

Table 42. Average and Median Real Dockside Value per Pound of Catfish

Year	Average	Median
2000	\$0.61	\$0.58
2001	\$0.56	\$0.53
2002	\$0.57	\$0.52
2003	\$0.56	\$0.50
2004	\$0.60	\$0.49
2005	\$0.52	\$0.46
2006	\$0.55	\$0.47
2007	\$0.55	\$0.46
2008	\$0.56	\$0.45
2009	\$0.58	\$0.45
2010	\$0.54	\$0.44
2011	\$0.56	\$0.45
2012	\$0.58	\$0.46
2013	\$0.58	\$0.44
2014	\$0.56	\$0.44
2015	\$0.59	\$0.45
2016	\$0.58	\$0.44

Catfish-Harvesting Fishermen by Volume Categories

To examine the diversity within the catfish harvester population, the commercial fishermen with catfish landings in each year of the study period were segregated into the four volume categories previously defined in this report. As before, the classification was based on the volume of all freshwater fish landings, not catfish landings.

In 2016, the small volume category, the lower-middle volume category, and the large volume category each contained about 26 percent of the population of catfish harvesters (Table 43). The upper-middle volume categories held about 22 percent.

Volume and Dockside Value of Catfish by Volume Categories

Catfish harvesters in the small volume category accounted for a disproportionately small percentage of total catfish landings. In 2016, commercial fishermen in the small volume category comprised over one-quarter of the population of the year's catfish harvesters, but harvested 1.2 percent of the volume (Table 44) and 0.8 percent (Table 45) of the real dockside value of catfish landings. Small volume category catfish harvesters produced less than 0.9 percent of the volume and value of catfish in every other year in the study period.

Catfish harvesters in the lower-middle volume category, about one-quarter of the catfish harvester population, accounted for 3.7 percent of the volume and 4.0 percent of the value of catfish in 2016. Commercial fishermen in this category were responsible for 1.8 to 4.1 percent of the volume of catfish landings in each of the previous years.

Upper-middle volume category catfish harvesters harvested 10.8 percent of the volume and 12.9 percent of the value of catfish landings in 2016. Throughout the study period, catfish harvesters in this category harvested nine to 16 percent by volume of the year's catfish landings.

The large volume category contained 25.9 percent of the population of catfish harvesters in 2016 but accounted for 84.3 percent of the volume and 82.2 percent of the dockside value of total catfish landings. This category - which never accounted for more than 36.2 percent of the population of catfish harvesters - harvested 80 to 89 percent of the catfish landed in each year of the study period.

Table 43. Number of Commercial Fishermen and Percentage of All Commercial Fishermen Who Landed Catfish in Each Fish Volume Category: 2000 - 2016

Year	Volume Category	Small	Lower-Middle	Upper Middle	Large	Total
2000	Number	215	224	211	202	852
	Percent	25.2%	26.3%	24.8%	23.7%	
2001	Number	178	185	192	191	746
	Percent	23.9%	24.8%	25.7%	25.6%	
2002	Number	134	159	142	184	619
	Percent	21.6%	25.7%	22.9%	29.7%	
2003	Number	117	115	118	149	499
	Percent	23.4%	23.0%	23.6%	29.9%	
2004	Number	126	132	111	170	539
	Percent	23.4%	24.5%	20.6%	31.5%	
2005	Number	99	116	123	167	505
	Percent	19.6%	23.0%	24.4%	33.1%	
2006	Number	87	80	106	155	428
	Percent	20.3%	18.7%	24.8%	36.2%	
2007	Number	81	92	101	148	422
	Percent	19.2%	21.8%	23.9%	35.1%	
2008	Number	70	87	101	146	404
	Percent	17.3%	21.5%	25.0%	36.1%	
2009	Number	83	94	88	129	394
	Percent	21.1%	23.9%	22.3%	32.7%	
2010	Number	90	107	94	126	417
	Percent	21.6%	25.7%	22.5%	30.2%	
2011	Number	123	139	127	153	542
	Percent	22.7%	25.6%	23.4%	28.2%	
2012	Number	140	142	122	163	567
	Percent	24.7%	25.0%	21.5%	28.7%	
2013	Number	107	106	114	150	477
	Percent	22.4%	22.2%	23.9%	31.4%	
2014	Number	104	102	127	158	491
	Percent	21.2%	20.8%	25.9%	32.2%	
2015	Number	130	141	136	160	567
	Percent	22.9%	24.9%	24.0%	28.2%	
2016	Number	144	143	120	142	549
	Percent	26.2%	26.0%	21.9%	25.9%	
Small Volume Category = Commercial fishermen with less than 560 pounds of freshwater fish landings Lower-Middle Volume Category = Commercial fishermen with 560 to 2,799 pounds of freshwater fish landings Upper-Middle Volume Category = Commercial fishermen with 2,800 to 11,999 pounds of freshwater fish landings. Large Volume Category = Commercial fishermen with more than 12,000 pounds of freshwater fish landings						

Table 44. Cumulative Volume of Catfish Landings and Percentage of the Total Caught by Commercial Fishermen in Each Volume Category: 2000-2016

Year	Volume Category	Small	Lower-Middle	Upper Middle	Large	Total
2000	Number	41,994	258,177	935,983	5,074,172	6,310,327
	Percent	0.7%	4.1%	14.8%	80.4%	
2001	Number	34,130	202,091	905,971	4,530,859	5,673,050
	Percent	0.6%	3.6%	16.0%	79.9%	
2002	Number	25,943	169,401	693,258	4,049,201	4,937,803
	Percent	0.5%	3.4%	14.0%	82.0%	
2003	Number	24,595	122,991	477,109	3,282,303	3,906,997
	Percent	0.6%	3.1%	12.2%	84.0%	
2004	Number	26,528	163,111	510,410	4,483,857	5,183,906
	Percent	0.5%	3.1%	9.8%	86.5%	
2005	Number	21,954	118,670	500,301	4,122,026	4,762,951
	Percent	0.5%	2.5%	10.5%	86.5%	
2006	Number	21,804	86,762	422,457	4,159,800	4,690,822
	Percent	0.5%	1.8%	9.0%	88.7%	
2007	Number	18,083	114,007	483,903	4,129,623	4,745,615
	Percent	0.4%	2.4%	10.2%	87.0%	
2008	Number	14,895	97,831	455,061	3,494,062	4,061,849
	Percent	0.4%	2.4%	11.2%	86.0%	
2009	Number	15,953	107,087	399,928	2,478,821	3,001,789
	Percent	0.5%	3.6%	13.3%	82.6%	
2010	Number	21,295	119,224	429,355	2,506,307	3,076,181
	Percent	0.7%	3.9%	14.0%	81.5%	
2011	Number	25,869	158,493	582,902	3,980,187	4,747,451
	Percent	0.5%	3.3%	12.3%	83.8%	
2012	Number	29,604	155,504	620,109	4,334,260	5,139,477
	Percent	0.6%	3.0%	12.1%	84.3%	
2013	Number	23,825	130,059	496,673	3,841,508	4,492,065
	Percent	0.5%	2.9%	11.1%	85.5%	
2014	Number	22,246	118,105	575,889	3,738,014	4,454,255
	Percent	0.5%	2.7%	12.9%	83.9%	
2015	Number	27,853	160,504	613,466	4,186,160	4,987,982
	Percent	0.6%	3.2%	12.3%	83.9%	
2016	Number	60,457	180,017	532,673	4,152,561	4,925,708
	Percent	1.2%	3.7%	10.8%	84.3%	

Table 45. Cumulative Real Dockside Value of Catfish Landings and Percentage of the Total Caught by Commercial Fishermen in Each Volume Category: 2000-2016

Year	Volume Category	Small	Lower-Middle	Upper Middle	Large	Total
2000	Number	\$26,456	\$159,662	\$549,570	\$3,085,403	\$3,821,091
	Percent	0.7%	4.2%	14.4%	80.7%	
2001	Number	\$18,489	\$109,981	\$522,355	\$2,551,159	\$3,201,983
	Percent	0.6%	3.4%	16.3%	79.7%	
2002	Number	\$15,392	\$101,869	\$379,462	\$2,200,604	\$2,697,327
	Percent	0.6%	3.8%	14.1%	81.6%	
2003	Number	\$14,401	\$68,614	\$257,766	\$1,731,882	\$2,072,663
	Percent	0.7%	3.3%	12.4%	83.6%	
2004	Number	\$18,288	\$92,986	\$278,692	\$2,271,571	\$2,661,537
	Percent	0.7%	3.5%	10.5%	85.3%	
2005	Number	\$12,731	\$64,850	\$252,854	\$2,021,521	\$2,351,956
	Percent	0.5%	2.8%	10.8%	86.0%	
2006	Number	\$13,716	\$50,752	\$232,920	\$2,106,065	\$2,403,454
	Percent	0.6%	2.1%	9.7%	87.6%	
2007	Number	\$11,821	\$65,391	\$255,872	\$2,088,300	\$2,421,383
	Percent	0.5%	2.7%	10.6%	86.2%	
2008	Number	\$9,845	\$63,655	\$240,022	\$1,679,286	\$1,992,808
	Percent	0.5%	3.2%	12.0%	84.3%	
2009	Number	\$12,252	\$69,377	\$234,069	\$1,144,463	\$1,460,161
	Percent	0.8%	4.8%	16.0%	78.4%	
2010	Number	\$11,736	\$64,465	\$211,865	\$1,124,742	\$1,412,808
	Percent	0.8%	4.6%	15.0%	79.6%	
2011	Number	\$16,888	\$88,915	\$301,945	\$1,963,366	\$2,371,115
	Percent	0.7%	3.7%	12.7%	82.8%	
2012	Number	\$17,510	\$102,175	\$302,381	\$2,032,747	\$2,454,813
	Percent	0.7%	4.2%	12.3%	82.8%	
2013	Number	\$15,909	\$81,428	\$292,469	\$1,697,898	\$2,087,703
	Percent	0.8%	3.9%	14.0%	81.3%	
2014	Number	\$17,119	\$67,776	\$298,489	\$1,817,369	\$2,200,753
	Percent	0.8%	3.1%	13.6%	82.6%	
2015	Number	\$19,132	\$92,651	\$346,661	\$2,132,754	\$2,591,199
	Percent	0.7%	3.6%	13.4%	82.3%	
2016	Number	\$19,663	\$96,009	\$306,318	\$1,953,997	\$2,375,987
	Percent	0.8%	4.0%	12.9%	82.2%	

Descriptive Statistics for Selected Characteristics of Catfish-Harvesting Fishermen by Volume Category

This section presents summary statistics for commercial fishing activity parameters, age, and place of residence for catfish harvesters in each volume category. Average measurements for each group are provided in every year for the volume and nominal dockside value of catfish landings, the real dockside value per pound, and the commercial fisherman's age.

Commercial Catfish-Harvesting Fishermen in the Small Volume Category

The average volume and real dockside value of catfish landings among catfish harvesters in the small volume category in 2016 were 211.5 pounds (Table 46) and \$137 (Table 47). In previous years, the average volume among catfish harvesters in this category ranged from approximately 192 pounds (in 2007 and 2013) to approximately 237 pounds (in 2010), somewhat below the category midpoint. The average real dockside value varied from a low of \$104 in 2001 to a high of \$165 in 2014.

Dockside value per pound was estimated by dividing the real dockside value of catfish by the volume for each catfish harvester. The small category average in 2016 was \$0.73 per pound, an estimate that was significantly higher than the average for every other category (Table 48).

The average age in the small volume category was 49.0 years old in 2016 (Table 49).

Commercial Catfish-Harvesting Fishermen in the Lower-Middle Volume Category

The average volume of catfish landings among commercial fishermen in the lower-middle volume category in 2015 was 1,258.9 pounds. This average was, like those for every other year in the study period, somewhat less than the category mid-point.

The average real dockside value of catfish landings for commercial fishermen in the lower-middle volume category in 2016 was \$671. The category average in previous years of the study period varied between \$559 (in 2005) and \$768 (in 2013).

The average value per pound among fishermen in this category was less than the average among catfish harvesters in the small volume category in most years in the study period. The average estimated real dockside value per pound of catfish for commercial fishermen in the lower-middle volume category in 2016 was \$0.55 per pound, which was significantly less than the average for the small volume category and significantly higher than the average for the large volume category.

The average age of a commercial catfish harvester in the lower-middle volume category in 2016 was 51.9 years old.

Commercial Catfish-Harvesting Fishermen in the Upper-Middle Volume Category

The average volume of catfish harvested by commercial catfish harvesters in the upper-middle volume category in 2016 was 4,438.9 pounds and \$2,553. The average volume for this category ranged from 3,985.4 pounds in 2006 to 5,082.9 pounds in 2012.

The average real dockside value per pound for fishermen in this category tended to be less than the corresponding average for the small category but larger than the average for the large volume category. The average real dockside value per pound of catfish among fishermen in the upper-middle volume category in 2016 was \$0.55 per pound, significantly less than the average for the small volume category and significantly larger than the average for the large volume category.

The average age of a catfish harvester in the upper-middle volume category in 2016 was 52.3 years old.

Table 46. Average Volume of Catfish Landed by Commercial Fishermen in Each Fish Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	195.3	1,152.6	4,435.9	25,119.7
2001	191.7	1,092.4	4,718.6	23,721.8
2002	193.6	1,065.4	4,882.1	22,006.5
2003	210.2	1,069.5	4,043.3	22,028.9
2004	210.5	1,235.7	4,598.3	26,375.6
2005	221.8	1,023.0	4,067.5	24,682.8
2006	250.6	1,084.5	3,985.4	26,837.4
2007	223.2	1,239.2	4,791.1	27,902.9
2008	212.8	1,124.5	4,505.6	23,931.9
2009	192.2	1,139.2	4,544.6	19,215.7
2010	236.6	1,114.2	4,567.6	19,891.3
2011	210.3	1,140.2	4,589.8	26,014.3
2012	211.5	1,095.1	5,082.9	26,590.6
2013	222.7	1,227.0	4,356.8	25,610.1
2014	213.9	1,157.9	4,534.6	23,658.3
2015	214.3	1,138.3	4,510.8	26,163.5
2016	211.5	1,258.9	4,438.9	29,243.4
Volume = Pounds				

Table 47. Average Real Dockside Value of Catfish Landed by Commercial Fishermen in Each Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	\$123	\$713	\$2,605	\$15,274
2001	\$104	\$594	\$2,721	\$13,357
2002	\$115	\$641	\$2,672	\$11,960
2003	\$123	\$597	\$2,184	\$11,623
2004	\$145	\$704	\$2,511	\$13,362
2005	\$129	\$559	\$2,056	\$12,105
2006	\$158	\$634	\$2,197	\$13,588
2007	\$146	\$711	\$2,533	\$14,110
2008	\$141	\$732	\$2,376	\$11,502
2009	\$148	\$738	\$2,660	\$8,872
2010	\$129	\$602	\$2,254	\$8,927
2011	\$137	\$640	\$2,378	\$12,832
2012	\$125	\$720	\$2,479	\$12,471
2013	\$149	\$768	\$2,566	\$11,319
2014	\$165	\$664	\$2,350	\$11,502
2015	\$147	\$657	\$2,549	\$13,330
2016	\$137	\$671	\$2,553	\$13,761

Table 48. Average Real Dockside Value per Pound of Catfish for Commercial Fishermen in Each Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	\$0.62	\$0.63	\$0.61	\$0.59
2001	\$0.57	\$0.55	\$0.57	\$0.55
2002	\$0.63	\$0.59	\$0.55	\$0.53
2003	\$0.62	\$0.56	\$0.53	\$0.53
2004	\$0.75	\$0.60	\$0.55	\$0.50
2005	\$0.59	\$0.55	\$0.51	\$0.47
2006	\$0.65	\$0.59	\$0.56	\$0.48
2007	\$0.70	\$0.58	\$0.52	\$0.48
2008	\$0.68	\$0.67	\$0.52	\$0.47
2009	\$0.75	\$0.60	\$0.58	\$0.45
2010	\$0.60	\$0.60	\$0.50	\$0.46
2011	\$0.68	\$0.55	\$0.50	\$0.52
2012	\$0.68	\$0.66	\$0.51	\$0.47
2013	\$0.72	\$0.62	\$0.59	\$0.44
2014	\$0.72	\$0.56	\$0.50	\$0.49
2015	\$0.72	\$0.61	\$0.55	\$0.50
2016	\$0.73	\$0.55	\$0.55	\$0.46

Table 49. Average Age of Catfish Harvesters in Each Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	44.6	46.7	48.5	48.8
2001	46.8	50.6	48.8	51.2
2002	49.1	47.8	51.3	52.3
2003	46.4	50.6	51.1	52.4
2004	49.8	50.8	51.9	51.9
2005	50.4	48.2	51.8	52.2
2006	50.9	53.3	53.4	51.6
2007	44.5	52.0	54.6	51.9
2008	50.5	54.3	51.2	53.9
2009	51.8	50.8	53.3	54.4
2010	49.4	49.9	56.2	51.7
2011	47.4	49.5	49.2	51.6
2012	48.7	52.9	52.1	52.1
2013	47.5	51.3	54.4	52.6
2014	48.6	54.6	55.6	52.5
2015	47.8	52.3	53.7	52.5
2016	49.0	51.9	52.3	45.8

Commercial Catfish-Harvesting Fishermen in the Large Volume Category

The average volume of catfish landings among commercial fishermen in the large volume category in 2016 was 29,243.3 pounds, a period maximum for this category. The average volumes observed in earlier portions of the study period ranged from 19,215.7 pounds in 2009 to 27,902.9 pounds in 2007.

The average real dockside value of catfish was \$13,761 in 2016, the highest average since 2007.

In each year during the study period, the average dockside value per pound was generally less than the average value per pound observed in the other categories. The average dockside price per pound of catfish among commercial fishermen in the large category in 2016 was \$0.46 per pound, significantly less than the average for every other volume category.

The average age of a large volume catfish harvester in 2016 was 45.8 years old.

Average Dockside Value of All Seafood Landings per Catfish-Harvesting Commercial Fisherman

For fishermen who landed catfish, the average real dockside value of all seafood landings in 2016 was \$17,745 (Table 50). (The real dockside average value of catfish landings among these fishermen in 2016 was \$4,328 (Table 41).) The average real dockside value of all seafood landed by catfish-harvesting fishermen varied from a minimum of \$14,129 in 2002 to a maximum of \$26,520 in 2014.

Ratio of Catfish Value to Value of All Seafood Landings

The dockside value of catfish landings was divided by the dockside value of all seafood landings for all catfish harvesters in each year of the study period. The average ratio of catfish landings to all seafood landings in 2016 was 0.505 (Table 51). The average values of this ratio were between 0.429 and 0.498 for 12 of the 17 years of the study period and between 0.505 and 0.569 for the remainder.

Trip-ticket datasets for commercial fishermen who landed catfish were merged with datasets for commercial fishermen who landed other species to discern how many catfish harvesters also landed other specific types of seafood. In 2015, 19.2 percent of the catfish harvesters also landed blue crabs (Table 52), 12.7 percent also landed shrimp (Table 53), and modest numbers also landed oysters (Table 54) and reef fish (Table 55).

Table 50. Average and Median Real Dockside Value of All Seafood Landings among Commercial Catfish Harvesters

Year	Average	Median	Standard Deviation	Coeff. of Variation
2000	\$17,110	\$4,882	43,020.7	251.43
2001	\$17,480	\$6,345	31,440.4	179.87
2002	\$14,129	\$5,864	23,560.0	166.75
2003	\$15,304	\$6,537	23,486.3	153.47
2004	\$14,920	\$5,163	24,875.0	166.72
2005	\$15,883	\$6,038	23,288.1	146.62
2006	\$14,715	\$4,706	29,411.2	199.87
2007	\$19,514	\$7,609	32,162.2	164.81
2008	\$19,632	\$8,233	31,248.2	159.17
2009	\$17,385	\$7,616	25,658.1	147.58
2010	\$15,367	\$5,895	23,881.0	155.41
2011	\$17,241	\$7,229	26,886.8	155.94
2012	\$17,668	\$5,037	29,020.9	164.25
2013	\$23,512	\$11,042	31,609.4	134.44
2014	\$26,520	\$10,710	39,816.5	150.14
2015	\$18,609	\$6,132	31,856.1	171.18
2016	\$17,745	\$5,687	28,954.0	163.17

Table 51. Average Ratio of Dockside Value of Catfish to Dockside Value of All Seafood Landings among Commercial Catfish Harvesters

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Average	0.519	0.497	0.486	0.488	0.565	0.494	0.569	0.527	0.467
Year	2009	2010	2011	2012	2013	2014	2015	2016	
Average	0.487	0.482	0.462	0.517	0.449	0.429	0.498	0.505	

Table 52. Number and Percentage of Catfish Harvesters Who Also Harvested Blue Crabs

Year	2000	2001	2002	2003	2004	2005	2006	2007
Number	223	164	98	108	82	84	72	76
Perc. of Catfish Harvesters	26.2%	22.0%	15.8%	21.6%	15.2%	16.6%	16.8%	18.0%
Year	2008	2009	2010	2011	2012	2013	2014	2015
Number	70	69	66	113	107	110	118	109
Perc. of Catfish Harvesters	17.3%	17.5%	15.8%	20.9%	18.9%	23.1%	24.0%	19.2%

Table 53. Number and Percentage of Catfish Harvesters Who Also Harvested Shrimp

Year	2000	2001	2002	2003	2004	2005	2006	2007
Number	203	116	71	70	60	56	23	39
Perc. of Catfish Harvesters	23.8%	15.6%	11.5%	14.0%	11.1	11.1%	5.4%	9.2%
Year	2008	2009	2010	2011	2012	2013	2014	2015
Number	47	44	43	65	73	69	74	72
Perc. of Catfish Harvesters	11.6%	11.2%	10.3%	12.0%	12.9%	14.5%	15.1%	12.7%

Table 54. Number and Percentage of Catfish Harvesters Who Also Harvested Oysters

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number	8	♠	♠	5	0	0	♠	♠	♠
Perc. of Catfish Harvesters	0.9%	♠	♠	1.0%	0.0%	0.0%	♠	♠	♠
Year	2009	2010	2011	2012	2013	2014	2015	2016	
Number	♠	0	3	4	4	3	♠	♠	
Perc. of Catfish Harvesters	♠	0.0%	0.6%	0.7%	0.8%	0.6%	♠	♠	
♠ Value withheld to maintain confidentiality standards									

Table 55. Number and Percentage of Catfish Harvesters Who Also Harvested Reef Fish

Year	2000	2001	2002	2003	2004	2005	2006	2007
Number	12	16	9	19	12	15	♠	6
Perc. of Catfish Harvesters	1.4%	2.1%	1.5%	3.8%	2.2%	3.0%	♠	1.4%
Year	2008	2009	2010	2011	2012	2013	2014	2015
Number	10	5	3	7	6	3	3	6
Perc. of Catfish Harvesters	2.5%	1.3%	0.7%	1.3%	1.1%	0.6%	0.6%	1.1%
♠ Value withheld to maintain confidentiality standards								

Dockside Value of All Seafood Landed by Catfish-Harvesting Commercial Fisherman in Different Volume Categories

This section examines the dockside value of total seafood landings harvested by catfish harvesters in each of the four volume categories, defined by the volume of all freshwater fish that the commercial fishermen harvested.

The average value of all seafood landings in 2016 was \$12,325 for catfish harvesters in the small volume category, \$14,746 in the lower-middle volume category, \$14,044 in the upper-middle volume category, and \$29,390 in the large volume category (Table 56). The average among catfish harvesters in the large volume category was generally larger than the average in other categories throughout the study period.

The average ratios of the value of catfish to the value of all seafood landings in 2016 (Table 57) were just under 0.50 among fishermen in the small (0.463) and upper-middle (0.494) volume categories and just over 0.50 among fishermen in the lower-middle (0.546) and large (0.516) volume category.

Table 56. Average Real Dockside Value of All Seafood Landed by Commercial Catfish Harvesters in Each Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	\$12,397	\$16,028	\$13,442	\$27,159
2001	\$17,421	\$12,601	\$13,135	\$26,626
2002	\$8,260	\$12,544	\$9,891	\$23,043
2003	\$13,438	\$9,260	\$12,517	\$23,641
2004	\$9,032	\$8,870	\$12,329	\$25,674
2005	\$11,226	\$11,714	\$9,170	\$26,484
2006	\$7,294	\$4,149	\$9,994	\$27,563
2007	\$12,177	\$10,019	\$17,173	\$31,031
2008	\$11,454	\$8,064	\$22,067	\$28,760
2009	\$9,862	\$15,363	\$13,041	\$26,664
2010	\$9,416	\$9,646	\$14,728	\$24,951
2011	\$12,271	\$8,966	\$14,087	\$31,373
2012	\$9,611	\$10,715	\$19,600	\$29,200
2013	\$22,285	\$19,942	\$18,099	\$31,023
2014	\$26,153	\$25,901	\$15,065	\$36,368
2015	\$17,511	\$12,443	\$12,149	\$30,427
2016	\$12,325	\$14,746	\$14,044	\$29,390
Real Value = Constant Inflation-Adjusted 2009 Dollars				

Table 57. Average Ratio of Catfish Value to Dockside Value of All Seafood Landings among Commercial Catfish Harvesters in Each Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	0.472	0.483	0.544	0.584
2001	0.448	0.477	0.512	0.546
2002	0.431	0.457	0.558	0.496
2003	0.504	0.464	0.486	0.494
2004	0.598	0.606	0.543	0.523
2005	0.476	0.501	0.509	0.490
2006	0.608	0.635	0.550	0.526
2007	0.578	0.595	0.500	0.475
2008	0.535	0.521	0.437	0.424
2009	0.637	0.433	0.497	0.422
2010	0.554	0.501	0.448	0.435
2011	0.455	0.498	0.444	0.449
2012	0.547	0.558	0.506	0.463
2013	0.402	0.502	0.465	0.434
2014	0.392	0.396	0.489	0.428
2015	0.516	0.515	0.511	0.458
2016	0.463	0.546	0.494	0.516

Appendix 2. Commercial Buffalo Harvesters

Number of Commercial Fishermen with Buffalo Landings

The term, buffalo, refers to several species of freshwater fish. The most commonly landed in Louisiana is the smallmouth buffalo. The number of commercial fishermen with landings of buffalo in 2016 was 135 (Table 58), about 18 percent (Table 60) of the number of commercial fishermen with landings of any species of freshwater fish that year (Table 1). In previous years, the number of buffalo harvesters had declined from a period maximum of 254 in 2004 to 128 in 2013 and 134 in 2013 and 2014.

Volume and Dockside Value of Buffalo Landings

The volume of commercial buffalo landings in Louisiana in 2016 was 3,004,420 pounds (Table 59) or roughly 25 percent (Table 60) of the total volume of all freshwater fish landed that year (Table 2). In previous years the volume varied between a minimum of 2,536,477 pounds in 2000 (21 percent of the volume of all freshwater fish) and a maximum of 3,818,985 pounds in 2007 (31 percent of the volume of all freshwater fish).

The real dockside value of commercial buffalo landings in Louisiana in 2016 were \$764,628 (Table 59), about one-sixth of the dockside value of all freshwater fish. The real dockside value had previously ranged between \$512,426 in 2000 (9.2 percent of total freshwater fish landings) and \$743,197 in 2007 (16.5 percent of total freshwater fish landings).

Age of Commercial Fishermen Who Landed Buffalo

The average age of a commercial buffalo harvester in 2016 was 44.5 years old (Table 61), the lowest average age during the study period. The median age for 2016 (52), however, was roughly equal to the median for the previous four years.

Place of Residence for Commercial Fishermen Who Landed Buffalo

In 2016 commercial buffalo harvesters resided in 30 different Louisiana parishes. A majority (55.5 percent) resided in five: Avoyelles, Iberville, Catahoula, Concordia, and St. Martin (Table 62).

Table 58. Number of Commercial Fishermen Reporting Buffalo Landings in Louisiana

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number	212	233	221	207	254	237	185	192	199
Year	2009	2010	2011	2012	2013	2014	2015	2016	
Number	163	136	148	153	128	134	134	135	

Table 59. Volume, Nominal Dockside Value, and Real Dockside Value of Commercial Buffalo Landings in Louisiana

Year	Volume	Nominal Dockside Value	Real Dockside Value
2000	2,536,477	\$419,626	\$512,426
2001	3,310,439	\$517,968	\$618,469
2002	3,154,262	\$493,672	\$580,517
2003	3,329,753	\$525,035	\$605,298
2004	3,223,915	\$550,582	\$617,798
2005	3,718,145	\$630,144	\$685,014
2006	3,736,990	\$671,051	\$707,785
2007	3,818,985	\$723,428	\$743,197
2008	3,251,736	\$638,002	\$642,823
2009	2,875,739	\$561,466	\$561,466
2010	2,823,149	\$575,477	\$568,541
2011	2,854,940	\$614,521	\$594,832
2012	2,817,788	\$623,383	\$592,513
2013	2,727,040	\$588,414	\$550,280
2014	2,753,397	\$664,584	\$611,449
2015	3,237,752	\$727,134	\$661,043
2016	3,004,420	\$852,178	\$764,628
Volume = Pounds		Real Value = Constant Inflation-Adjusted 2009 Dollars	

Table 60. Number of Commercial Buffalo Harvesters as a Percentage of All Commercial Fishermen Who Landed Freshwater Fish and the Volume and Value of Buffalo Landings as a Percentage of Total Freshwater Fish Landings in Louisiana

Year	Percentage of Fishermen	Percentage of Volume	Percentage of Value
2000	18.5%	21.4%	9.2%
2001	22.8%	24.9%	12.4%
2002	23.6%	25.1%	12.6%
2003	24.7%	29.7%	14.8%
2004	29.0%	26.8%	13.6%
2005	29.7%	31.6%	15.4%
2006	29.1%	31.9%	14.9%
2007	28.5%	31.0%	16.5%
2008	28.6%	27.6%	14.9%
2009	24.3%	27.7%	16.4%
2010	21.5%	31.5%	18.8%
2011	19.8%	24.9%	14.0%
2012	19.0%	23.4%	13.4%
2013	17.5%	22.1%	12.5%
2014	19.5%	22.5%	13.2%
2015	17.0%	25.6%	13.3%
2016	18.4%	25.3%	16.4%

Table 61. Average and Median Age of Commercial Fishermen Who Landed Buffalo

Year	Average	Median
2000	48.3	49
2001	50.7	50.5
2002	50.4	49.5
2003	49.0	47
2004	48.4	47
2005	48.9	47
2006	50.6	48
2007	50.9	49
2008	52.3	50
2009	51.8	50
2010	51.8	51
2011	48.4	47
2012	51.9	52
2013	51.8	51
2014	52.0	51
2015	52.4	51
2016	44.5	52

Average Volume of Buffalo per Buffalo-Harvesting Commercial Fisherman

The average volume of buffalo landed per buffalo harvester in 2016 was 22,255.0 pounds (Table 63). In previous years, the average volume per buffalo harvesters ranged between 11,965.0 pounds per fisherman in 2000 and 24,162 pounds per fisherman in 2015. The average volume of buffalo per buffalo harvester was regularly larger than the average volume of catfish per catfish harvester (Table 40).

Average Dockside Value of Buffalo per Buffalo-Harvesting Commercial Fisherman

The average real dockside value of buffalo in 2016 was \$5,664 per fisherman, a period maximum (Table 64). The average real dockside value was generally between \$2,400 and \$2,900 in the first six years of the study period and over \$3,800 per fisherman for the last seven years.

The average dockside value of buffalo per buffalo fisherman was somewhat larger than the dockside value of catfish per catfish fisherman for the last three years of the study period. (The difference between the averages was not significant in 2016).

Average Real Dockside Value per Pound of Buffalo

An estimate of the real dockside value per pound of buffalo was computed for each buffalo harvester by dividing the dockside value of buffalo landings by the volume (Table 65). The average real dockside value per pound in 2016 was \$0.36 per pound. The median was \$0.27 per pound.

Table 62. Parish or State of Residence for Commercial Fishermen Who Landed Buffalo

Area	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Assumption	11	11	8	9	13	9	4	3	9	♠	6	6	7	3	3	3	3
	5.2%	4.7%	3.6%	4.3%	5.1%	3.8%	2.2%	1.6%	4.5%	♠	4.4%	4.1%	4.6%	2.3%	2.2%	2.2%	2.2%
Avoyelles	37	32	46	32	34	40	34	30	26	28	26	22	27	22	17	19	23
	17.5%	13.7%	20.8%	15.5%	13.4%	16.9%	18.4%	15.6%	13.1%	17.2%	19.1%	14.9%	17.6%	17.2%	12.7%	14.2%	17.0%
Caddo	6	7	6	6	6	4	4	5	6	4	4	5	4	3	♦	3	♦
	2.8%	3.0%	2.7%	2.9%	2.4%	1.7%	2.2%	2.6%	3.0%	2.5%	2.9%	3.4%	2.6%	2.3%	♦	2.2%	♦
Catahoula	17	13	14	7	8	6	9	9	9	13	13	14	15	13	12	10	15
	8.0%	5.6%	6.3%	3.4%	3.1%	2.5%	4.9%	4.7%	4.5%	8.0%	9.6%	9.5%	9.8%	10.2%	9.0%	7.5%	11.1%
Concordia	17	19	15	14	12	12	10	10	12	17	13	10	10	4	10	9	8
	8.0%	8.2%	6.8%	6.8%	4.7%	5.1%	5.4%	5.2%	6.0%	10.4%	9.6%	6.8%	6.5%	3.1%	7.5%	6.7%	5.9%
Iberia		6	4	7	11	8	6	10	7	♠	0	♠	3	3	5	3	4
		2.6%	1.8%	3.4%	4.3%	3.4%	3.2%	5.2%	3.5%	♠	0.0%	♠	2.0%	2.3%	3.7%	2.2%	3.0%
Iberville	26	43	27	47	52	52	28	42	43	38	29	32	29	27	27	26	21
	12.3%	18.5%	12.2%	22.7%	20.5%	21.9%	15.1%	21.9%	21.6%	23.3%	21.3%	21.6%	19.0%	21.1%	20.1%	19.4%	15.6%
Pointe Coupee	4	3	8	5	5	5	6	7	♠	3	3	4	5	3	4	3	4
	1.9%	1.3%	3.6%	2.4%	2.0%	2.1%	3.2%	3.6%	♠	1.8%	2.2%	2.7%	3.3%	2.3%	3.0%	2.2%	3.0%
Rapides	8	6	8	5	4	6	6	♣	♣	3	♣	5	3	3	3	6	6
	3.8%	2.6%	3.6%	2.4%	1.6%	2.5%	3.2%	♣	♣	1.8%	♣	3.4%	2.0%	2.3%	2.2%	4.5%	4.4%
St. Landry	5	6	8	9	12	7	5	6	9	6	5	7	3	5	5	3	5
	2.4%	2.6%	3.6%	4.3%	4.7%	3.0%	2.7%	3.1%	4.5%	3.7%	3.7%	4.7%	2.0%	3.9%	3.7%	2.2%	3.7%
St. Martin	15	13	19	20	25	30	24	19	21	12	8	10	9	11	11	16	8
	7.1%	5.6%	8.6%	9.7%	9.8%	12.7%	13.0%	9.9%	10.6%	7.4%	5.9%	6.8%	5.9%	8.6%	8.2%	11.9%	5.9%
Vermilion	12	9	9	6	6	4	5	4	3	0	0	♥	0	♥	♥	0	0
	5.7%	3.9%	4.1%	2.9%	2.4%	1.7%	2.7%	2.1%	1.5%	0.0%	0.0%	♥	0.0%	♥	♥	0.0%	0.0%

Table 69. Parish or State of Residence for Commercial Fishermen Who Landed Buffalo (Concluded)

Area	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Other North Louisiana	15	15	16	9	13	16	14	15	17	10	8	6	9	7	10	9	9
	7.1%	6.4%	7.2%	4.3%	5.1%	6.8%	7.6%	7.8%	8.5%	6.1%	5.9%	4.1%	5.9%	5.5%	7.5%	6.7%	6.7%
Other Central	5	8	12	7	10	8	9	16	12	11	13	10	8	5	6	7	7
	2.4%	3.4%	5.4%	3.4%	3.9%	3.4%	4.9%	8.3%	6.0%	6.7%	9.6%	6.8%	5.2%	3.9%	4.5%	5.2%	5.2%
Other Southeastern	11	18	8	10	16	12	7	7	5	4	4	6	9	8	11	7	5
	5.2%	7.7%	3.6%	4.8%	6.3%	5.1%	3.8%	3.6%	2.5%	2.5%	2.9%	4.1%	5.9%	6.3%	8.2%	5.2%	3.7%
Other Southwestern	20	19	12	11	23	15	12	5	15	11	3	9	10	10	7	6	16
	9.4%	8.2%	5.4%	5.3%	9.1%	6.3%	6.5%	2.6%	7.5%	6.7%	2.2%	6.1%	6.5%	7.8%	5.2%	4.5%	11.9%
Out of State	0	†	0	3	3	†	†	3	0	0	0	0	†	†	0	0	0
	0.0%	†	0.0%	1.4%	1.2%	†	†	1.6%	0.0%	0.0%	0.0%	0.0%	†	†	0.0%	0.0%	0.0%
Unknown or Confidential	3	5	1	0	1	3	2	1	5	3	1	2	2	1	3	4	1
	1.4%	2.1%	0.5%	0.0%	0.4%	1.3%	1.1%	0.5%	2.5%	1.8%	0.7%	1.4%	1.3%	0.8%	2.2%	3.0%	0.7%
<p>The “Other North Louisiana” category includes Bienville, Bossier, Caddo, Claiborne, East Carroll, Lincoln, Madison, Morehouse, Ouachita, Richland, Union, Webster, and West Carroll parishes.</p> <p>The “Other Central Louisiana” category includes Caldwell, De Soto, Franklin, Grant, Jackson, La Salle, Natchitoches, Red River, Tensas, and Winn parishes.</p> <p>The “Other Southeastern” category includes East Baton Rouge, East Feliciana, Orleans, St. Bernard, St. John the Baptist, Washington, and West Feliciana parishes.</p> <p>The “Other Southwestern Parishes” category includes Allen, Beauregard, Calcasieu, Cameron, Evangeline, Jefferson Davis, Lafayette, St. Mary, Vernon, and West Baton Rouge parishes.</p> <p>♦ Value added to the “Other North Louisiana” category to maintain confidentiality standards. ♣ Value added to the “Other Central Louisiana” category to maintain confidentiality standards. ♠ Values added to the “Other Southwestern Louisiana” category to maintain confidentiality standards. ♥ Values added to the “Other Southeastern Louisiana” category to maintain confidentiality standards. † Values added to the “Unknown or Confidential” category to maintain confidentiality standards.</p>																	

Table 63. Average and Median Volume of Buffalo Among Commercial Fishermen Who Landed Buffalo

Variable	Average	Median	Standard Deviation	Coeff. of Variation
2000	11,964.5	1,464	24,893.2	208.06
2001	14,207.9	2,694	26,811.9	188.71
2002	14,272.7	1,694	28,914.4	202.59
2003	16,085.8	3,632	32,307.3	200.84
2004	12,692.6	1,725	26,023.9	205.03
2005	15,688.4	2,352	29,350.4	187.08
2006	20,200.0	3,962	39,837.7	197.22
2007	19,890.6	2,269	41,387.4	208.08
2008	16,340.4	2,068	35,229.5	215.60
2009	17,642.6	2,516	37,735.7	213.89
2010	20,758.5	5,192	39,972.6	192.56
2011	19,290.1	4,460	41,024.6	212.67
2012	18,416.9	2,474	40,261.7	218.61
2013	21,305.0	3,994	39,635.1	186.04
2014	20,547.7	3,067	42,423.1	206.46
2015	24,162.3	3,772	49,797.7	206.10
2016	22,255.0	3,849	45,592.1	204.86

Table 64. Average and Median Real Dockside Value of Buffalo Among Commercial Fishermen Who Landed Buffalo

Variable	Average	Median	Standard Deviation	Coeff. of Variation
2000	\$2,417	\$317	4,848.5	200.59
2001	\$2,654	\$434	5,204.1	196.06
2002	\$2,627	\$344	5,357.8	203.97
2003	\$2,924	\$667	5,903.5	201.89
2004	\$2,432	\$302	5,042.6	207.33
2005	\$2,890	\$398	5,407.8	187.12
2006	\$3,826	\$730	7,484.4	195.63
2007	\$3,871	\$528	8,280.0	213.91
2008	\$3,230	\$449	6,924.0	214.35
2009	\$3,445	\$513	7,176.9	208.35
2010	\$4,180	\$1,206	7,795.9	186.49
2011	\$4,019	\$1,110	8,710.6	216.73
2012	\$3,873	\$588	8,539.7	220.51
2013	\$4,299	\$947	7,770.3	180.74
2014	\$4,563	\$667	9,398.8	205.98
2015	\$4,933	\$982	9,929.7	201.28
2016	\$5,664	\$919	18,341.2	323.82

Table 65. Average and Median Real Dockside Value per Pound of Buffalo

Year	Average	Median
2000	\$0.22	\$0.18
2001	\$0.20	\$0.19
2002	\$0.20	\$0.18
2003	\$0.19	\$0.17
2004	\$0.21	\$0.17
2005	\$0.20	\$0.18
2006	\$0.20	\$0.17
2007	\$0.22	\$0.18
2008	\$0.22	\$0.16
2009	\$0.24	\$0.18
2010	\$0.27	\$0.20
2011	\$0.27	\$0.19
2012	\$0.27	\$0.19
2013	\$0.26	\$0.18
2014	\$0.25	\$0.18
2015	\$0.28	\$0.18
2016	\$0.36	\$0.27

Buffalo-Harvesting Fishermen by Volume Categories

The commercial fishermen with buffalo landings in each year of the study period were segregated into the four volume categories defined by the volume of all freshwater fish landings they harvested in a year. In 2016, about six percent of the buffalo harvesters were in the small volume category, 16.3 percent were in the lower-middle, 22.2 percent were in the upper-middle, and 55.6 percent were in the large volume category (Table 66). In that year, as in all but one year, during the study period, the large volume category contained a majority of the commercial fishermen who harvested buffalo.

Volume and Dockside Value of Buffalo by Volume Categories

In 2016, commercial fishermen in the small volume category harvested 0.1 percent of the volume (Table 67) and 0.05 percent (Table 68) of the real dockside value of buffalo landings. Small volume category buffalo harvesters produced 0.1 percent or less of the volume of buffalo in every year in the study period.

Buffalo harvesters in the lower-middle volume category, about one-sixth of the buffalo harvester population, accounted for 0.6 percent of the volume and 1.2 percent of the value of buffalo in 2016. Commercial fishermen in this category were responsible for less than one percent of the volume of buffalo landings in every year in the study period.

Upper-middle volume category buffalo harvesters harvested 3.8 percent of the volume and 3.5 percent of the value of buffalo landings in 2016. Throughout the study period, buffalo harvesters in this category harvested 2.3 to 6.2 percent by volume of the year's buffalo landings.

The large volume category contained 55.6 percent of the population of buffalo harvesters in 2016 but accounted for 95 percent of the volume and dockside value of total buffalo landings. This category accounted for over 92 percent of the volume of buffalo landed in each year of the study period.

Table 66. Number of Commercial Fishermen and Percentage of All Commercial Fishermen Who Landed Buffalo in Each Volume Category: 2000 - 2016

Year	Volume Category	Small	Lower-Middle	Upper Middle	Large	Total
2000	Number	12	29	65	106	212
	Percent	5.7%	13.7%	30.7%	50.0%	
2001	Number	16	38	60	119	233
	Percent	6.9%	16.3%	25.8%	51.1%	
2002	Number	19	36	46	120	221
	Percent	8.6%	16.3%	20.8%	54.3%	
2003	Number	15	32	54	106	207
	Percent	7.2%	15.5%	26.1%	51.2%	
2004	Number	15	52	58	129	254
	Percent	5.9%	20.5%	22.8%	50.8%	
2005	Number	16	48	52	121	237
	Percent	6.8%	20.3%	21.9%	51.1%	
2006	Number	10	30	46	99	185
	Percent	5.4%	16.2%	24.9%	53.5%	
2007	Number	15	32	47	98	192
	Percent	7.8%	16.7%	24.5%	51.0%	
2008	Number	13	27	59	100	199
	Percent	6.5%	13.6%	29.6%	50.3%	
2009	Number	16	26	40	81	163
	Percent	9.8%	16.0%	24.5%	49.7%	
2010	Number	9	19	32	76	136
	Percent	6.6%	14.0%	23.5%	55.9%	
2011	Number	12	23	29	84	148
	Percent	8.1%	15.5%	19.6%	56.8%	
2012	Number	13	26	31	83	153
	Percent	8.5%	17.0%	20.3%	54.2%	
2013	Number	8	14	30	76	128
	Percent	6.3%	10.9%	23.4%	59.4%	
2014	Number	12	15	29	78	134
	Percent	9.0%	11.2%	21.6%	58.2%	
2015	Number	6	25	28	75	134
	Percent	4.5%	18.7%	20.9%	56.0%	
2016	Number	5	22	60	75	135
	Percent	5.9%	16.3%	22.2%	55.6%	
Small Volume Category = Commercial fishermen with less than 560 pounds of freshwater fish landings Lower-Middle Volume Category = Commercial fishermen with 560 to 2,799 pounds of freshwater fish landings Upper-Middle Volume Category = Commercial fishermen with 2,800 to 11,999 pounds of freshwater fish landings. Large Volume Category = Commercial fishermen with more than 12,000 pounds of freshwater fish landings						

Table 67. Cumulative Volume of Buffalo Landings and Percentage of the Total Caught by Commercial Fishermen in Each Volume Category: 2000-2016

Year	Volume Category	Small	Lower-Middle	Upper Middle	Large	Total
2000	Number	1,654	13,286	140,317	2,381,219	2,536,477
	Percent	0.1%	0.5%	5.5%	93.9%	
2001	Number	3,479	25,715	204,587	3,076,658	3,310,439
	Percent	0.1%	0.8%	6.2%	92.9%	
2002	Number	3,805	21,227	107,689	3,021,541	3,154,262
	Percent	0.1%	0.7%	3.4%	95.8%	
2003	Number	2,297	20,726	153,314	3,153,416	3,329,753
	Percent	0.1%	0.6%	4.6%	94.7%	
2004	Number	2,515	28,231	129,829	3,063,339	3,223,915
	Percent	0.1%	0.9%	4.0%	95.0%	
2005	Number	3,231	39,066	136,553	3,539,294	3,718,145
	Percent	0.1%	1.1%	3.7%	95.2%	
2006	Number	1,397	22,736	183,951	3,528,906	3,736,990
	Percent	0.0%	0.6%	4.9%	94.4%	
2007	Number	2,078	23,959	96,114	3,696,834	3,818,985
	Percent	0.1%	0.6%	2.5%	96.8%	
2008	Number	1,707	19,196	144,608	3,086,224	3,251,736
	Percent	0.1%	0.6%	4.4%	94.9%	
2009	Number	3,488	18,113	119,410	2,734,728	2,875,739
	Percent	0.1%	0.6%	4.2%	95.1%	
2010	Number	1,314	15,894	121,997	2,683,943	2,823,149
	Percent	0.05%	0.6%	4.3%	95.1%	
2011	Number	1,470	18,859	80,766	2,753,844	2,854,940
	Percent	0.1%	0.7%	2.8%	96.5%	
2012	Number	1,704	21,339	71,797	2,722,949	2,817,788
	Percent	0.1%	0.8%	2.5%	96.6%	
2013	Number	1,177	8,936	77,994	2,638,933	2,727,040
	Percent	0.04%	0.3%	2.9%	96.8%	
2014	Number	2,341	10,371	87,697	2,652,988	2,753,397
	Percent	0.1%	0.4%	3.2%	96.4%	
2015	Number	1,771	22,316	75,595	3,138,070	3,237,752
	Percent	0.1%	0.7%	2.3%	96.9%	
2016	Number	1,548	17,194	114,311	2,871,368	3,004,420
	Percent	0.1%	0.6%	3.8%	95.6%	

Table 68. Cumulative Real Dockside Value of Buffalo Landings and Percentage of the Total Caught by Commercial Fishermen in Each Volume Category: 2000-2016

Year	Volume Category	Small	Lower-Middle	Upper Middle	Large	Total
2000	Number	\$338	\$2,676	\$30,205	\$479,207	\$512,426
	Percent	0.1%	0.5%	5.9%	93.5%	
2001	Number	\$809	\$5,811	\$34,828	\$577,022	\$618,469
	Percent	0.1%	0.9%	5.6%	93.3%	
2002	Number	\$1,001	\$5,526	\$23,065	\$550,925	\$580,517
	Percent	0.2%	1.0%	4.0%	94.9%	
2003	Number	\$412	\$4,668	\$26,812	\$573,405	\$605,298
	Percent	0.1%	0.8%	4.4%	94.7%	
2004	Number	\$662	\$5,571	\$47,444	\$564,121	\$617,798
	Percent	0.1%	0.9%	7.7%	91.3%	
2005	Number	\$1,033	\$9,708	\$26,398	\$647,875	\$685,014
	Percent	0.2%	1.4%	3.9%	94.6%	
2006	Number	\$416	\$4,751	\$46,351	\$656,267	\$707,785
	Percent	0.1%	0.7%	6.5%	92.7%	
2007	Number	\$425	\$8,077	\$19,715	\$714,979	\$743,197
	Percent	0.1%	1.1%	2.7%	96.2%	
2008	Number	\$466	\$5,722	\$31,315	\$605,321	\$642,823
	Percent	0.1%	0.9%	4.9%	94.2%	
2009	Number	\$1,449	\$4,548	\$36,362	\$519,108	\$561,466
	Percent	0.3%	0.8%	6.5%	92.5%	
2010	Number	\$692	\$6,549	\$34,429	\$526,871	\$568,541
	Percent	0.1%	1.2%	6.1%	92.7%	
2011	Number	\$547	\$6,997	\$17,607	\$569,681	\$594,832
	Percent	0.1%	1.2%	3.0%	95.8%	
2012	Number	\$792	\$6,146	\$20,766	\$564,810	\$592,513
	Percent	0.1%	1.0%	3.5%	95.3%	
2013	Number	\$685	\$1,412	\$28,546	\$519,637	\$550,280
	Percent	0.1%	0.3%	5.2%	94.4%	
2014	Number	\$830	\$3,097	\$24,779	\$582,744	\$611,449
	Percent	0.1%	0.5%	4.1%	95.3%	
2015	Number	\$1,444	\$6,529	\$28,238	\$624,832	\$661,043
	Percent	0.2%	1.0%	4.3%	94.5%	
2016	Number	\$369	\$9,314	\$26,755	\$728,189	\$764,627
	Percent	0.05%	1.2%	3.5%	95.2%	

Descriptive Statistics for Selected Characteristics of Buffalo-Harvesting Fishermen by Volume Category

This section presents summary statistics for commercial fishing activity parameters, age, and place of residence for buffalo harvesters in each volume category. Average measurements for each group are provided in every year for the volume and nominal dockside value, the real dockside value per pound, and the commercial fishermen's age.

Commercial Buffalo-Harvesting Fishermen in the Small Volume Category

The average volume and real dockside value of buffalo landings among buffalo harvesters in the small volume category in 2016 were 193.4 pounds (Table 69) and \$46.20 (Table 70). In previous years, the average volume among buffalo harvesters in this category ranged from approximately 131 pounds in 2008 to approximately 295 pounds in 2015. The average real dockside value varied from a low of \$28 in 2000 to a high of \$241 in 2015.

The average real dockside value per pound among fishermen in the small category average in 2016 was \$0.42 per pound (Table 71).

The average age of a buffalo harvester in the small volume category was 52.6 years old in 2016 (Table 72).

Commercial Buffalo-Harvesting Fishermen in the Lower-Middle Volume Category

The average volume of buffalo landings among commercial fishermen in the lower-middle volume category in 2016 was 781.5 pounds. This average was less than the category mid-point in that and every other year during the study period.

The average real dockside value of buffalo landings for commercial fishermen in the lower-middle volume category in 2016 was \$423, a period category maximum. The category average in previous years of the study period varied between \$92 (in 2000) and \$345 (in 2010).

The average estimated real dockside value per pound of buffalo for commercial fishermen in the lower-middle volume category in 2016 was \$0.46 per pound.

The average age of a commercial buffalo harvester in the lower-middle volume category in 2016 was 56.0 years old.

Commercial Buffalo-Harvesting Fishermen in the Upper-Middle Volume Category

The average volume of buffalo harvested by commercial buffalo harvesters in the upper-middle volume category in 2016 was 3,810.4 pounds and \$892. The average volume for this category ranged from 2,045 pounds in 2007 to 3,999 pounds in 2006.

The average real dockside value per pound for fishermen in this category tended to be less than the corresponding average for the small volume category. The average real dockside value per pound of buffalo among fishermen in the upper-middle volume category in 2016 was \$0.22 per pound.

The average age of a buffalo harvester in the upper-middle volume category in 2016 was 48.5 years old.

Commercial Buffalo-Harvesting Fishermen in the Large Volume Category

The average volume of buffalo landings among commercial fishermen in the large volume category in 2016 was 38,284.9 pounds. The average volumes of buffalo in the large volume category followed a generally upward path from 22,464.3 pounds in 2000 to 41,284.9 pounds, a period maximum, in 2015.

The average real dockside value of buffalo was \$9,709.2 in 2016, a study period maximum. The average dockside price per pound of buffalo among commercial fishermen in the large category in 2016 was \$0.23 per pound.

The average age of a large volume buffalo harvester in 2016 was 38.5 years old.

Table 69. Average Volume of Buffalo Landed by Commercial Fishermen in Each Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	137.9	458.2	2,158.7	22,464.3
2001	217.5	676.7	3,409.8	25,854.3
2002	200.3	589.6	2,341.1	25,179.5
2003	153.1	647.7	2,839.2	29,749.2
2004	167.7	542.9	2,238.4	23,746.8
2005	201.9	813.9	2,626.0	29,250.4
2006	139.7	757.9	3,998.9	35,645.5
2007	138.5	748.7	2,045.0	37,722.8
2008	131.3	711.0	2,451.0	30,862.2
2009	218.0	696.6	2,985.2	33,762.1
2010	146.0	836.5	3,812.4	35,315.1
2011	122.5	820.0	2,785.1	32,783.9
2012	131.1	820.7	2,316.0	32,806.6
2013	147.1	638.3	2,599.8	34,722.8
2014	195.1	691.4	3,024.0	34,012.7
2015	295.1	892.6	2,699.8	41,840.9
2016	193.4	781.5	3,810.4	38,284.9
Volume = Pounds				

Table 70. Average Real Dockside Value of Buffalo Landed by Commercial Fishermen in Each Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	\$28.1	\$92.3	\$464.7	\$4,520.8
2001	\$50.5	\$152.9	\$580.5	\$4,848.9
2002	\$52.7	\$153.5	\$501.4	\$4,591.0
2003	\$27.5	\$145.9	\$496.5	\$5,409.5
2004	\$41.3	\$107.1	\$818.0	\$4,373.0
2005	\$60.8	\$202.2	\$507.7	\$5,354.3
2006	\$41.6	\$158.4	\$1,007.6	\$6,629.0
2007	\$28.4	\$252.4	\$419.5	\$7,295.7
2008	\$35.8	\$211.9	\$530.8	\$6,053.2
2009	\$90.5	\$174.9	\$909.0	\$6,408.7
2010	\$76.9	\$344.7	\$1,075.9	\$6,932.5
2011	\$42.1	\$304.2	\$607.1	\$6,781.9
2012	\$60.9	\$236.4	\$669.9	\$6,804.9
2013	\$85.6	\$100.9	\$951.5	\$6,837.3
2014	\$69.1	\$206.5	\$854.4	\$7,471.1
2015	\$240.6	\$261.2	\$1,008.5	\$8,331.1
2016	\$46.2	\$423.4	\$891.8	\$9,709.2

Table 71. Average Real Dockside Value per Pound of Buffalo for Commercial Fishermen in Each Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	\$0.25	\$0.27	\$0.22	\$0.20
2001	\$0.25	\$0.21	\$0.19	\$0.19
2002	\$0.23	\$0.21	\$0.20	\$0.19
2003	\$0.18	\$0.18	\$0.19	\$0.19
2004	\$0.23	\$0.19	\$0.24	\$0.20
2005	\$0.38	\$0.19	\$0.18	\$0.18
2006	\$0.30	\$0.21	\$0.22	\$0.18
2007	\$0.25	\$0.32	\$0.20	\$0.20
2008	\$0.26	\$0.28	\$0.21	\$0.20
2009	\$0.40	\$0.27	\$0.25	\$0.19
2010	\$0.51	\$0.39	\$0.29	\$0.20
2011	\$0.68	\$0.30	\$0.21	\$0.22
2012	\$0.61	\$0.33	\$0.24	\$0.21
2013	\$0.71	\$0.15	\$0.34	\$0.20
2014	\$0.36	\$0.29	\$0.24	\$0.22
2015	\$0.87	\$0.31	\$0.29	\$0.22
2016	\$0.42	\$0.46	\$0.22	\$0.23

**Table 72. Average Age of Buffalo-Landing Commercial Fishermen in Each Volume
Category: 2000 - 2016**

Year	Small	Lower-Middle	Upper-Middle	Large
2000	44.5	47.8	48.3	48.7
2001	53.0	51.7	49.7	50.7
2002	45.1	47.2	50.2	51.9
2003	39.5	48.8	48.3	50.6
2004	50.1	44.4	46.3	50.8
2005	43.3	45.9	47.1	51.7
2006	47.2	52.2	50.5	50.4
2007	47.2	49.3	47.9	53.3
2008	53.1	49.4	51.6	53.3
2009	60.7	48.1	49.2	52.5
2010	46.1	53.1	54.9	50.8
2011	41.4	46.7	48.9	49.6
2012	56.2	52.0	51.4	51.4
2013	54.3	50.6	51.9	51.7
2014	55.5	53.5	52.4	51.1
2015	61.0	53.1	54.1	50.9
2016	52.6	56.0	48.5	38.5

Average Dockside Value of All Seafood Landings per Buffalo-Harvesting Commercial Fisherman

For fishermen who landed buffalo, the average real dockside value of all seafood landings in 2016 was \$17,354 (Table 73). (The real dockside average value of buffalo landings per buffalo harvester in 2016 was \$5,664 (Table 64)). The average real dockside value of all seafood varied from a low of \$12,542 in 2003 to a high of \$22,285 in 2014.

Ratio of Buffalo Value to Value of All Seafood Landings

The dockside value of buffalo landings was divided by the dockside value of all seafood landings for all buffalo harvesters in each year of the study period. The average ratio of buffalo landings to all seafood landings in 2016 was 0.361 (Table 74). The average ratio generally increased during the study period from 0.279 in 2000 to 0.376 in 2015.

Trip-ticket datasets for commercial fishermen who landed buffalo were merged with datasets for commercial fishermen who landed other species to discern how many buffalo harvesters also landed other specific types of seafood.

Large majorities of buffalo harvesters also reported landings of catfish (Table 75), perhaps unsurprising given the similarity in habitat. Small percentages also landed blue crabs (Table 76) or shrimp (Table 77). Very few, if any, also landed oysters (Table 78) or reef fish (Table 79).

Table 73. Average and Median Real Dockside Value of All Seafood Landings among Commercial Buffalo Harvesters

Year	Average	Median	Standard Deviation	Coeff. of Variation
2000	\$14,046	\$6,447	20,015.2	142.50
2001	\$15,992	\$8,395	21,376.7	133.67
2002	\$13,169	\$7,731	16,477.6	125.13
2003	\$12,542	\$6,537	15,420.3	122.95
2004	\$13,827	\$6,868	18,744.7	135.56
2005	\$14,729	\$7,042	19,059.3	129.40
2006	\$15,760	\$6,530	29,738.9	188.70
2007	\$18,629	\$8,560	28,882.4	155.04
2008	\$17,619	\$8,848	20,527.2	116.51
2009	\$15,733	\$7,876	20,719.9	131.69
2010	\$14,533	\$6,508	18,972.5	130.55
2011	\$16,155	\$6,940	21,677.8	134.18
2012	\$14,319	\$8,295	18,357.4	128.20
2013	\$19,743	\$12,756	22,173.8	112.31
2014	\$22,285	\$10,803	28,760.1	129.05
2015	\$19,300	\$10,748	30,560.0	158.34
2016	\$17,354	\$6,942	30,123.2	173.58

Table 74. Average Ratio of Dockside Value of Buffalo to Dockside Value of All Seafood Landings among Commercial Buffalo Harvesters

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Average	0.279	0.271	0.284	0.304	0.245	0.352	0.410	0.306	0.298
Year	2009	2010	2011	2012	2013	2014	2015	2016	
Average	0.343	0.368	0.326	0.351	0.308	0.346	0.376	0.361	

Table 75. Number and Percentage of Buffalo Harvesters Who Also Harvested Catfish

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number	199	221	196	157	193	171	157	144	146
Perc. of Buffalo Harvesters	93.9%	94.9%	88.7%	75.9%	76.0%	72.2%	84.9%	75.0%	73.4%
Year	2009	2010	2011	2012	2013	2014	2015	2016	
Number	109	107	122	123	100	110	112	111	
Perc. of Buffalo Harvesters	66.9%	78.7%	82.4%	80.4%	78.1%	82.1%	83.6%	82.2%	

Table 76. Number and Percentage of Buffalo Harvesters Who Also Harvested Blue Crabs

Year	2000	2001	2002	2003	2004	2005	2006	2007
Number	26	18	7	15	14	17	14	16
Perc. of Buffalo Harvesters	12.3%	7.7%	3.2%	7.3%	5.5%	7.2%	7.6%	8.3%
Year	2008	2009	2010	2011	2012	2013	2014	2015
Number	16	3	3	9	15	10	16	5
Perc. of Buffalo Harvesters	8.0%	1.8%	2.2%	6.1%	9.8%	7.8%	11.9%	3.7%

Table 77. Number and Percentage of Buffalo Harvesters Who Also Harvested Shrimp

Year	2000	2001	2002	2003	2004	2005	2006	2007
Number	16	17	♠	6	11	5	8	5
Perc. of Buffalo Harvesters	7.6%	7.3%	♠	2.9%	4.3%	2.1%	4.3%	2.6%
Year	2008	2009	2010	2011	2012	2013	2014	2015
Number	4	0	3	4	6	5	4	5
Perc. of Buffalo Harvesters	2.0%	0.0%	2.2%	2.7%	3.9%	3.9%	3.0%	3.7%
♠ Value withheld to maintain confidentiality standards.								

Table 78. Number and Percentage of Buffalo Harvesters Who Also Harvested Oysters

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number	♠	0	♠	♠	0	0	0	0	0
Perc. of Buffalo Harvesters	♠	0.0%	♠	♠	0.0%	0.0%	0.0%	0.0%	0.0%
Year	2009	2010	2011	2012	2013	2014	2015	2016	
Number	0	0	0	0	♠	♠	0	♠	
Perc. of Buffalo Harvesters	0.0%	0.0%	0.0%	0.0%	♠	♠	0.0%	♠	
♠ Value withheld to maintain confidentiality standards.									

Table 79. Number and Percentage of Buffalo Harvesters Who Also Harvested Reef Fish

Year	2000	2001	2002	2003	2004	2005	2006	2007
Number	0	♣	0	0	♣	♣	♣	♣
Perc. of Buffalo Harvesters	0.0%	♣	0.0%	0.0%	♣	♣	♣	♣
Year	2008	2009	2010	2011	2012	2013	2014	2015
Number	0	0	♣	♣	♣	♣	♣	♣
Perc. of Buffalo Harvesters	0.0%	0.0%	♣	♣	♣	♣	♣	♣
♣ Value withheld to maintain confidentiality standards.								

Dockside Value of All Seafood Landed by Buffalo-Harvesting Commercial Fisherman in Different Volume Categories

This section examines the dockside value of total seafood landings harvested by buffalo harvesters in each of the four previously defined freshwater fish volume categories.

The average value of all seafood landings in 2016 was \$168 for buffalo harvesters in the small volume category, \$1,345 in the lower-middle volume category, \$3,648 in the upper-middle volume category, and \$29,365 in the large volume category (Table 80). The average ratio of the value of buffalo to the value of all seafood landings in 2016 (Table 81) was 0.513 percent in the small volume category, 0.335 percent in the lower-middle, 0.448 percent in the upper-middle, and 0.319 percent in the large volume category.

Table 80. Average Real Dockside Value of All Seafood Landed by Commercial Buffalo Harvesters in Each Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	\$180	\$3,992	\$7,856	\$22,162
2001	\$1,652	\$9,113	\$7,055	\$24,623
2002	\$1,392	\$2,401	\$6,406	\$20,856
2003	\$2,171	\$1,438	\$5,306	\$21,048
2004	\$2,221	\$1,982	\$6,080	\$23,435
2005	\$1,055	\$5,063	\$5,748	\$24,230
2006	\$427	\$2,570	\$7,381	\$25,198
2007	\$1,522	\$4,143	\$9,333	\$30,436
2008	\$1,319	\$3,727	\$12,370	\$26,586
2009	\$562	\$2,645	\$10,132	\$25,697
2010	\$6,374	\$4,751	\$5,497	\$21,749
2011	\$1,856	\$3,693	\$3,616	\$25,940
2012	\$7,421	\$5,689	\$7,328	\$20,715
2013	\$2,057	\$6,255	\$11,864	\$27,200
2014	\$15,023	\$3,700	\$9,968	\$31,556
2015	\$266	\$5,311	\$11,637	\$28,347
2016	\$168	\$1,345	\$3,648	\$29,365

Table 81. Average Ratio of Dockside Value of Buffalo to Dockside Value of All Seafood Landings among Commercial Buffalo Harvesters in Each Volume Category: 2000 - 2016

Year	Small	Lower-Middle	Upper-Middle	Large
2000	0.449	0.212	0.243	0.301
2001	0.335	0.203	0.270	0.284
2002	0.483	0.285	0.172	0.295
2003	0.227	0.346	0.239	0.335
2004	0.357	0.209	0.193	0.269
2005	0.570	0.387	0.269	0.343
2006	0.787	0.380	0.433	0.370
2007	0.335	0.344	0.183	0.348
2008	0.400	0.441	0.224	0.290
2009	0.588	0.401	0.253	0.321
2010	0.215	0.408	0.371	0.375
2011	0.170	0.387	0.298	0.340
2012	0.416	0.346	0.289	0.365
2013	0.450	0.319	0.227	0.323
2014	0.643	0.329	0.308	0.318
2015	0.897	0.402	0.312	0.350
2016	0.513	0.335	0.448	0.319